

The traditional symbol of orthopaedic Surgery, described by Nicolas Andry in 1741, is the bent tree that has been braced to make it grow upward and straight.

## **Ganga Hospital**

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## Department of **ORTHOPAEDIC SURGERY** Ganga Hospital, Coimbatore, India.

Activity Report 2013 - 2014



## Founders



Mrs. Kanakavalli Shanmuganathan & Dr. J. G. Shanmuganathan

## Vision

- To showcase to the world the best in patient care, surgical expertise, academics, medical ethics and state-of-the art technology.
  - To be a center which will be a pride of our country.

## **Mission**

• To provide quality treatment at affordable cost so that the expertise will be available to every citizen of our country.



**Dr. S. Rajasekaran and Dr. S. Raja Sabapathy** Heads of Departments of Orthopaedic Surgery and Plastic Surgery



## Dr Ravindra Bhat 1993-2012

Dr Ravindra Bhat headed the Department of Anaesthesia of Ganga Hospital from 1993-2012 and laid the foundation for trauma care in the hospital. His dedication and involvement in the care of severely injured left an everlasting impression to all those who have met him. He did pioneering work in the initial management of polytrauma victims, regional anaesthesia and nerve block and was a source of inspiration for the numerous fellows and trainees from all over the world.

To perpetuate his memory, '**Ganga Hospital – Dr Ravindra Bhat Memorial Oration**' has been initiated and will be delivered annually by an eminent medical personnel.

To live in the hearts of those who love you is never to die...



The year 2013 started with a happy note that we became the first Orthopaedic Unit in Asia to be elected to the International Society of Orthopaedic Centres (ISOC), a prestigious forum comprising of only 15 of the most eminent and leading international orthopaedic academic centres in the world. On the national front, we also had the honour of being voted as the **Best Orthopaedic Centre in India** amongst private hospitals in the survey conducted by the popular magazine 'The Week'. Such honours help us to dedicate ourselves to our mission with greater passion.

The clinical work surpassed all previous years with 25,780 new patients, 1,64,795 total outpatient entries and 21,782 major orthopaedic surgeries. Our quest for high safety standards for patients continued with the acquisition of the AIRO Intraoperative CT based computer navigation (BrainLAB, Germany) which gives the highest level of safety and accuracy in complex spine, joint replacement and tumor surgeries. We are proud to be the first centre in the whole of Asia Pacific region to acquire this sophisticated technology.

Academically, we continue to be in the forefront being recognised by the National Board and the Medical University for a wide range of courses from basic paramedical training to PhD studies in Orthopaedic Surgery. We were happy to be awarded the prestigious ISSLS prize for Spine Research for the third time in 2013 and this award topped the numerous other research awards won at the national and state level.

Notwithstanding the above achievements, our real satisfaction lies in reaching out to the society and making available the high expertise and technology to every citizen of our country. We were the largest participant in the state for the Tamilnadu Chief Minister's Below Poverty line Scheme performing 3399 complex surgeries providing subsidy of more than Rs. 10 Crores. We also established the Ganga Spine Injury Rehabilitation Centre (GSIRC) under a cost of more than Rs. 3 Crores for subsidized or free rehabilitation for poor patients with spinal cord injury.

I record our gratitude to all our referring physicians for their support, our patients for their trust and the God Almighty for his continued and abundant blessings. We realize that the only way we can pay back His Blessings is to constantly improve and dedicate ourselves back to our society.

Prof. S. Rajasekaran

## "Small Aim is a Crime" - Shri APJ Abdul Kalam

M.S., DNB., F.R.C.S.(Ed)., M.Ch(Liv)., FACS., F.R.C.S.(Eng)., Ph.D Chairman, Dept of Orthopaedics, Trauma & Spine Surgery.

## Highlights 2013 - 2014



#### **Member of ISOC**

The Orthopaedic Unit of Ganga Hospital elected to the International Society of Orthopaedic Centres (ISOC). ISOC is a very select group of only 15 BEST orthopaedic units in the world. The membership is by invitation and we are proud to be the first Unit in Asia to be invited to join this group from South Asia.

#### **Salient Awards 2014**

- ISSLS Best Presentation Award 2014
- ASSI Basic Science Research Award 2014
- Indian Orthopaedic Association Silver Jubilee Oration 2014
- IOA Prof Joy Patankar Gold Medal 2014
- Dr Venkat Rao Oration Indian Society Of Anaesthesiologists 2014
- Prof Ramanathan Consultant Gold Medal Tamil Nadu Orthopaedic Association 2014

#### Salient Awards 2013

- ISSLS Basic Science Award 2013
- Orthopedic Association Of South India States (OASIS) Lifetime Achievement Award 2012
- IOA Basic Science Research Award 2013
- Indian Orthopaedic Association Young Ambassador Award 2013
- ASSI Basic Science Research Award 2013
- Best Case Presentation Award in Arthroplasty 2013
- Aospine International Research Commission Chair
- PROF A A Mehta Medal Indian Orthopaedic Association Conference 2013
- IOA RC Rallan Gold Medal 2013
- IOA Prof Joy Patankar Gold Medal 2013
- ASSI Publication Award 2013
- PROF P. Dhanarajan Gold Medal Tamil Nadu Orthopaedic Association 2013
- PROF M Natarajan Gold Medal, Tamilnadu Orthopaedic Association 2013
- PROF Ramanathan Consultant Gold Medal Tamil Nadu Orthopaedic Association 2013

#### **Prestigious Orations 2013& 2014**

- SICOT Plenary Oration, Hyderabad 2013
- Combined Meeting of SAFO and KOA Plenary Lecture, Kenya 2013
- Prof Marthandam Memorial Oration, 12th Annual Conference of OASISCON, 2013
- Presidential Address, 26th Annual Conference of Association of Spine Surgeons of India, 2013
- 15th Sivasubramaniam Oration, Meeting of Indian Academy of Pediatrics Coimbatore Branch, 2013
- Dr Vyaghreswarudu Memorial Oration, 42nd Annual Conference of OSSAPCON, 2013
- Singaore Orthopaedic Association Plenary Oration, Singapore 2014
- Orthopaedic Association of SAARC Countries Plenary Oration, 2014
- Prof TK Shanmugasundaram Endowment Oration, Chennai, 2014
- Dr Dinubhai Patel Oration, Annual Meeting of the Spine Association of Gujarat, 2014
- North Zone Chapter of Indian Orthopaedic Association, Plenary Lecture, 2014
- Dr MS Ramakrishnan Memorial Endowment Oration, The Child's Trust Medical Research Foundation, 2014
- Prof M Natarajan Oration, 47th Annual Conference of Tamilnadu Orthopaedic Association, 2014

Year	Out patients	1
2012	1,54,790	
2013	1,62,289	
2014	1.89.529	

#### **Research Collaborations**

- Tamil Nadu Agriculture University, Coimbatore Gene analysis in patients with back pain
- University of Hongkong Genetic basis of DDD
- Venkateshwara University, New Delhi Biochemical analysis of End-Plate in disc prolapse
- Central Leather Research Institute, Chennai Analysis of collagen characteristics of Lumbar discs in health & disease
- Tromsoe Mine Victim Resource Center University Hospital of Northern Norway Study on Open Injuries

#### **Research Milestones**

- Department of Scientific and Industrial Research (DSIR) Recognition
- Department of Biotechnology (DBT) : Approval for DTI project
- Approval for Ph D program by Dr MGR Medical University and the Madras University

#### **NABH Accreditation** The hospital was accredited by the

National Board of Accreditation for Hospital & Healthcare Institutions

**Clinical Work** 

#### **In patients**

#### **Surgeries**

23,516	13,446
20,585	20,679
21,503	21,782

#### **Corporate Social Responsibilities**

Project "Help Line" -Help for the Helpless

"Uyir" A People's Movement. Against Road Accidents

'SWASAM' Inaugurated on Former President, Shri APJ Abdul Kalam

> "RASTRA" "Life Without Disability" Project

> > "GSIRC" Ganga Spine Injury and Rehabilitation Centre

### **Best Orthopaedic Hospital 2014**



**Adjudged as the Third Best Hospital in India** 

**Best amongst Private Hospitals** 

#### **Conferences Hosted 2013 & 2014**

• Ganga Operative Spine Course 2013 • Ganga Operative Arthroplasty Course 2013 • 34th Indian Association of Sports Medicine Congress 2013 • Ganga Operative Trauma Course 2014 • 13 SCS (ISSICON 2013) and 12 ASCON Meeting • CTLS - Comprehensive Trauma Life Support Course • SICOT - (Société Internationale de Chirurgie Orthopédique et de Traumatologie) • Ganga Operative Pediatric Hip Course 2014

## Ganga Hospital - The Journey



#### 1978 - 1991 - Established in 1978 in Ramnagar,

The hospital is named after Shri. J. S. Gangadharan, father of the founder of the hospital, Dr. J. G. Shanmuganathan. • 17 beds

• Two Operating Rooms



### **1991-1996 The First Expansion**

- 42 beds
- Four Operating Rooms



#### 1996-2007 - The Second Expansion

- 135 beds
- Six Operating Rooms
- Intensive Trauma Care Unit

#### 2010...

#### **Ganga Institute of Health Sciences**

- Diploma in Nursing & Midwifery
- B.Sc., Nursing 4 years
- Post Basic B.Sc., Nursing 2 years
- B.Sc., Physician Assistant

(Emergency and Trauma Management) - 4 years,



## 2007... New premises on Mettupalayam Road, Coimbatore

## **Computer Navigated Surgery**

Shoulder and **Elbow Surgery** 

Trauma

Surgery

- 486 In-patient beds
- 20 Operating Rooms
- Intensive Trauma Care Unit
- Regional Blood Bank
- Bone & Tissue Bank

- 425 seated Auditorium

**Paediatric Orthopaedics** 

## **Minimally Invasive Surgery**



## Ganga Hospital - The Journey

**Joint Replacement** • Spinal injury Rehabilitation Centre • In-house Conference facility with

**Spine Surgery** 

**Surgery** 

**Sports Medicine** and Arthroscopy



walk far, walk together African Proverb towant vou - If walk alone walk fast, 10 want " If you

The department has grown into an accomplished and skilled team, comprising of six Orthopaedic Consultants heading different sub-specialties, five Associate Consultants and numerous fellows. The department also comprises of a dedicated team for clinical research.

Chairman, Dept. of Orthopaedic Surgery

Prof. S. Rajasekaran

Academic Director Prof. Dr. M.V. Daniel

Consultants

Dr. J Dheenadhavalan Complex Trauma Reconstruction Dr. T Ajoy Prasad Shetty Spine Surgery

Upper Limb Surgery

Dr. P Dhanasekara Raja Arthroplasty

Associate Consultants

Dr. P. Rishi Kanna Spine Surgery

Dr. K. Venkatadass Paediatric Orthopaedics

Senior Registrars

Dr J Mohamed Zackariaya, Dr Velmurugesan

### Registrars

Dr Roy Wilson Armstrong, Dr Prem James Charles, Dr S Rajadurai, Dr K V Arun Kumar, Dr C Karthikeyan, Dr Veerabhadra J, Dr G Chandrasekaran, Dr Nagaraja H S, Dr Pradeep A R, Dr Naveen Kumar S, Dr M M R Sandeep, Dr Srimanth B S, Dr Vetri Ganapathy Dr Natana Sabapathy, Dr.S.Sathyamoorthi, Dr.R.Arun, Dr Manjunath, Dr. Anant Singh, Dr. Sivakumar, Dr.Vasudeva, Dr Rathna Mohan Rao M, Dr. Sivakumar Mani, Dr. Senthil P, Dr. A. Thirumurugan

### Fellows

#### **DR MGR University Fellows**

Dr Omprakash Gupta Dr Navdeep Lokare Dr Harpreet Singh Dr Sachin Ramesh Jain Dr Abishek K.M Dr Vetri Ganapathy Dr A.R.Pradeep

**FNB Sports Medicine** 

Dr. Ajay Singh

Dr Naveen Kumar S Dr Raviprakash Dr Pankaj R Chakradhare Dr Ramakanth Dr Khalid Muzzafar Dr Siddharth Pigilam

Arthroplasty Fellows

Dr. Jayanta Kumar Baidya Dr. Avinash C. K.

DNB Post Graduates

Dr Rane Pankaj, Dr Srikanth Dallal, Dr Manjunath, Dr Vinay Pawar, Dr Gowri Shankar S, Dr Kiran Chandran, Dr Rahul, Dr Nibukurian, Dr Santosh, Dr Vishal, Dr Rizwan Basha Z, Dr Phanikumar, Dr Karunakar Reddy, Dr.Vetri Chelvan S, Dr Praveen Kumar Khot, Dr Mohammed Shafeer, Dr Harsha G.N, Dr Srinivas Kandula, Dr A Kiran Kumar, Dr.Avula Srinivasa Reddy, Dr.Srikesh Ravi, Dr.Manoj Kumar Dwivedi, Dr.G.T.Saiprasanth , Dr. Sijad V.P, Dr. Jerin.J.Vadakkan, Dr. Kamaatchiprabu, Dr.Joydeep Mallik

> Research Co-ordinator Dr. Janardhan S. Yerramshetty

Department Secretaries Mr Mohana Krishnan, Mr G Prabhu, Mr Bala & Mrs R Radha Orthopaedic Team

Dr. SR Sundararajan Arthroscopy & Sports Medicine

Dr. N. Rajkumar Arthroplasty

**Dr. Ramesh Perumal** Trauma Surgery

Dr. Devendra A Trauma Surgery

Dr Arun Kamal C Trauma Surgery

#### **Trauma Fellows**

Dr. Kashif Dr. Praveen Reddy Dr. Anoop Ramakrishna Dr. Kartheek Dr. Varun Kumar Sharma

Dr. Dinesh

#### **FNB** Trauma

Dr. Santhosh Ram Gaddam

#### **FNB Spine Fellows**

Dr Neeraj Gupta Dr Om Prakash Narayan Dr Suresh Subramani Dr Siddharth Iver Dr Gurudip Das Dr Vibhu Krishnan V Dr Sreekanth Reddy Rajoli

#### **ASSI Spine Fellows**

Dr Chandrasekar Gaike Dr AjithKumar



**Prof. S. Rajasekaran** M.S, DNB, F.R.C.S.(Ed), M.Ch(Liv), F.A.C.S, F.R.C.S.(Eng), Ph.D, Chairman, Dept of Orthopaedic, Trauma & Spine Surgery.

Dr Rajasekaran has been instrumental in building and shaping the orthopaedic department into a very busy clinical unit with strong academic and research components. He had a brilliant academic career and was the 'Best outgoing student' of Coimbatore Medical College and stood first in the University of Madras in the orthopaedic postgraduate examinations. He was awarded the Khazenifer Gold Medal and Norman Roberts Medal for best performance during his M.Ch exams in Liverpool, UK. He completed his Ph.D in 2000.

He has special interest in spine surgery, arthroplasty and clinical research in major trauma. He has led the unit's basic science research in spinal deformities, disc nutrition and biology and genetics of disc degeneration which have been recognised with numerous awards and published in international journals. He was also instrumental in the evolution of 'Ganga Hospital Open Injury Severity Score' which guides critical decisions in saving and reconstructing severely injured limbs.

## Prof. S. Rajasekaran

#### Academic:

- Chairman, Dept of Orthopaedic & Spine Surgery
- Adjunct Professor, The Tamilnadu Dr MGR Medical University.
- Hunterian Professor, Royal College of Surgeons of England, 2011 - 12

#### **Professional Bodies:**

- President-Elect, SICOT
- Chair International Research Commission, AOSpine President Indian Orthopaedic Association
- Past President. Association of Spine Surgeons of India, 2008 - 12. Past President,
- International Society for the Study of Lumbar Spine (ISSLS), Canada, 2011 - 12
- Past President, Indian Orthopaedic Association, 2012
- Past President, Tamilnadu Orthopaedic Association, 2012

#### **International Awards:**

- Walter P. Blount Humanitarian Award, Scoliosis Research Society, USA -2015
- ISSLS Spine Research Award 2012, 2010, 2004
- EuroSpine Open Paper Award 2008
- Honorary Fellowship, Royal College of Surgeons of England, 2010
- ISSLS Macnab La Rocca Award 2005, 2014
- ISSLS Sofamer Danek Award 1996, 2002, 2006
- Harvard Medical International Award, 2007

#### **National Awards**

- Golden Jubilee Research Award IOA 2010
- MCI Silver Jubilee Research Award 2002
- Tamilnadu Government Scientist Award 2000
- ASSI Research Awards 2005,06,07,08,09,10,14
- ASSI Publication Award 2013,2014
- ASI Hari Om Ashram Alembic Research Award 2004

#### **Textbooks**

- Chief Editor, ASSI Textbook of Spinal Infections & Trauma
- Chief Editor, Video Atlas of Spine Surgery

#### Journals

- European Spine Journal Editorial Board Member.
- Spine Deputy Editor.
- Journal of Bone and Joint Surgery(B)-Editorial Member.
- Journal of Orthopaedic Surgery, Hong Kong.
- Journal of Orthopaedic Science, Japan.



Sitting: Dr. S. Rajasekaran, Standing L to R : Dr N Raj Kumar, Dr. J.Dheenadhayalan, Dr. Ajoy Prasad Shetty, Dr. S.R. Sundararajan, Dr. P Dhanasekara Raja,

Dr. J. Dheenadhayalan joined the department in 1992 after basic training at Mysore Medical College. He had his advanced training at Nuffield orthopaedic center and Milton Keynes general hospital UK, and fellowship training in joint replacement at Tubingen and Regensberg, Germany. A Founder member of the APOA trauma section and holds member position in AO Trauma and Shoulder society of India. He was the editor of Tamilnadu orthopaedic Journal and assistant editor to Indian journal of orthopaedics. His field of interest is shoulder surgery and surgery in complex trauma situations.

Dr. Ajoy Prasad Shetty joined the department in 1994 and became a consultant in 2000. Initially trained in Orthopaedics at Bangalore Medical College, he had advanced training in Spine Surgery at The Queen Elizabeth Hospital, Adelaide, Australia. He was the Organising Secretary for the APOA Operative Spine Course in 2007. He is a regular faculty at AO Spine Courses and was awarded the ISSLS International Fellowship for the year 2007. He is also the co-author of the scientific papers which won the ISSLS Prize 2004, 2010, 2012 and EuroSpine Award 2008.

Dr. S.R. Sundararajan joined the department in 1997 and working as a Consultant in Arthroscopy, Sports Medicine and Special interest in foot and ankle. After finishing his post graduation training, he had advanced training in Flinders Medical Centre in Australia and also short term training at Arthroscopic Centres in France and Cape Town, South Africa. He is a regular faculty in National Arthroscopy and Foot and Ankle conferences. He had won the Best Paper Award in Indian Arthroscopy meetings of 2008 and 2013 and consultant medals in 2013 and 2014 of TNOA. He has organized INDO-US Foot and Ankle course in 2011 and IASM 2013. He was also involved in organizing Trauma conferences. Currently, he is a Vice President of Indian Association of Sports Medicines and General Council Member in Indian Arthroscopy Society and Joint Secretary in Indian and Foot Ankle Society.

Dr. P. Dhanasekara Raja is a Consultant Joint replacement surgeon. After his basic training in orthopaedics he has completed Fellowships in Arthroplasty and Arthroscopy at Adelaide & Sydney, Australia and Hospital for Special Surgery, Newyork, USA and was the APOA Travelling Clinical Arthroplasty Fellow in 2010. He did his Diploma in Tissue banking from the National University of Singapore. He has done various clinical research works in joint replacement and has won various awards for the research presentations at various meetings. He has been an invited facultyat various meetings. He is the coauthors of various publications in peer reviewed journals and textbook chapter. His area of interest includes management of surgical arthritis of hip and knee (primary and revision total hip and knee replacements), trauma surgery and tissue banking.

**Dr N Rajkumar** is a Consultant in Arthroplasty surgery. He underwent advanced training in Arthroplasty and Traumatology at Flinders Medical Centre, Adelaide and Prince Charles Hospital, Brisbane, Australia. He has been awarded the Traveling Fellowship Award for the Japanese Orthopaedic Association Conference in Japan 2008. He has done AO basic and Advanced trauma courses along with cadaveric course in Complex Pelvic and Acetabular trauma. He was organizing secretary for Ganga Operative Arthroplasty Course in 2011, 2013 and has been involved in conducting many conferences.

## Associate Consultants in Orthopaedics



Dr Rishi Kanna finished his graduation from the Madurai Medical College in 2002, where he was the best outgoing student with four gold medals. He pursued his post graduation from Post graduate Institute at Chandigarh. He was elected as a member of Royal College of Surgeons of Edinburgh in 2007. He completed the fellowship training in spine surgery at Ganga Hospital and advanced spine surgical fellowship at Nottingham, England. He has special interests in basic spine research and has won several awards both at the national and international level. He has several international publications and authored chapters in international orthopaedic textbooks.

**Dr Venkatadass K** joined the unit in 2006 after completing his MS Orthopaedics from the Manipal University. He has a passion for pediatric orthopedics and underwent short-term fellowships under Dr Ashok Johari, Mumbai and Dr Vrisha Madhuri, CMC Vellore. He also successfully completed a fellowship in Limb Reconstruction Surgery under Dr MGR Medical University. He completed his Advanced fellowship in Paediatric and Adolescent Hip Disorders from the Rady Children's Hospital, San Diego, USA. He won the Best Paper Award at POSICON 2011 and Dr Joy Patankar Gold Medal at IOACON 2014. He is actively involved in research activities of the paediatric orthopaedic unit.





Dr Ramesh Perumal had his basic orthopaedic training at Kilpauk Medical College, Chennai in 2004 and completed his Diplomate National Board in Orthopaedics from Ganga hospital in 2006. He joined the unit as a registrar in 2007 and became a senior registrar from 2009 onwards. He won the PG quiz in 2005 state conference and also the clinical commitment award as the best outgoing student in DNB training period. He completed pelvi-acetabular and geriatric trauma in the University of Johannes-Gutenberg, Mainz, Germany and Medical University of Innsbruck, Austria in 2014. He received the RC Rallan Gold Medal for basic science research in IOACON 2013.

Dr Devendra Agraharam joined the department in 2005 as a Post graduate. He received Best Resident Award in 2005 and was awarded Prof M V Daniel Gold Medal for Exemplary Clinical Care in 2010 and Prof M Natarajan Gold Medal in TNOA 2006. He got trained in Bone banking at TATA Memorial hospital, Mumbai and NUS, Singapore and started Bone bank in Ganga hospital in 2008. He completed trauma fellowship in the Department of Trauma, Medical University of Innsbruck, Austria in 2011. He has received Prof A A Mehta Gold medal in IOACON 2013.





Dr. C. Arun Kamal completed his M.B.B.S., and M.S. Ortho from Govt. Kilpauk Medical College, Chennai in 2003 and 2008 respectively. He joined Ganga hospital as registrar in 2009 and completed Diplomate national board in orthopaedics in 2010 and became Associate consultant in trauma surgery in 2014. He completed masters course in trauma, organised by Indo-German orthopaedic foundation at Chennai. He has presented papers at various state and national level conferences and also worked as scientific committee member in Ganga trauma conferences.



## Department of Neurosurgery

**Dr. V. Rajeshbabu** is a consultant Neurosurgeon and joined the institution in 2010. He completed his M.S. General Surgery in 1994 at Coimbatore Medical College and MCH Neuro surgery at Madras Medical College, Chennai in 2001. He manages all major head injuries in our centre and he is also the project co-ordinator of the Neurological Society of Coimbatore. was organizing secretary for 64rd Annual National Conference of Neurological Society of India.

## Department of Radiology

The department of radiology is highly specialized in diagnostic imaging of Musculoskeletal pathology performing more than 7000 MRI, 5000 CT and one lakh plain radiograph investigations every year. It is well equipped with a Magnetom Symphony 1.5 Tesla MRI, multislice CT scan and five digital plain radiograph machines. Radiology services are available round the clock to provide expert care at all times of the day. Apart from the busy clinical load, the department is also closely associated with the orthopaedic department in performing research in advanced imaging techniques of the spine.

Dr Anupama NV, heads the Department. She completed her DNB in radiodiagnosis from Apollo Hospital, Chennai and subsequently qualified as a Fellow of the Royal College of Radiology, UK. She is involved in research on imaging of spinal trauma and DTI of the spinal cord. Dr Kumar, DNB and Dr Prakash, DNB form the other members of the team.



Dr Prakash & Dr Kumar

## Blood Bank & laboratory

We have one of the most sophisticated laboratories to process various clinical biochemistry, clinical pathology, serology, immunoassay, haematolgy and microbiology samples. To acheive the highest standards in maintaining quality, we have enrolled ourselves in various Internationally acclaimed EXTERNAL QUALITY and INTERNAL QUALITY ASSURANCE PROGRAMMES.

Blood banking services is committed to provide blood and its components complying with all required regulations and standards. Most of the blood is collected from regular, voluntary blood donors. To ensure safety and quality we use an advanced state of the art equipment ARCHITECT i1000sr for screening the blood donors. This technology can reduce the window period risk of transmission of infections considerably. We are issuing approximately 1000-1200 units of blood and its components every month. We are the first in Coimbatore District to start a blood storage centre and function as a regional blood bank centre.



Blood donation in progress.

## Hospital Facilities



Dr. Anupama N.V

<b>Department of Radiology - Statistics</b>			
Year	2012	2013	2014
MRI	6223	6,149	6520
CT	5025	5421	6534
USG	1919	2513	4692
X-Ray	1,07,790	1,14,384	1,01,396



Laboratory services.

## Department of Anaesthesia

The Department of Anaesthesia is well equipped for safe perioperative care. The department has on its rolls 28 full time anesthesiologists and 12 trainee anaesthesiologists, who offer round the clock services. They serve as perioperative physicians and offer comprehensive perioperative care. The focus is on Acute pain Service which aids in early rehabilitation and well being of the surgical patients. The department specialises in advanced Regional Anaesthesia, Anaesthetic solutions to major reconstructive spine surgeries and Arthroplasties, Geriatric Anaesthesia, Paediatric Anaesthesia and anaesthesia for major polytrauma victims The department offers postgraduate training in Anaesthesia, Fellowships in Nerve block and pain management, Regional Anaesthesia and Trauma Anaesthesia.

## Consultants



Dr. C Sekar joined the institution as a Consultant in 1995. His special interest is in anaesthesia for spine surgery and Ultrasound-guided nerve blocks. He has been an invited faculty for the Oman Medical University Conference for the past two years. He materialized the training initiative at our hospital for the anaesthesia Students from Oman in collaboration with The Oman Medical Specialty Board. He was be the President of City Branch of ISA, Coimbatore Chapter in 2011-12. He has delivered 6 lectures nationally and 2 lectures internationally and has been a faculty in 8 live workshops.

Dr. J. Balavenkatasubramanian joined the institution as a Consultant in 1995. He is the founder President of Academy of Regional Anaesthesia of India and the current National Chairman, Editorial Board Member of Indian Journal of Anaesthesia and Journal of Research Society of Anaesthesia and Clinical Pfarmacology, National Executive Committee Member of International Trauma Care, Indian Chapter, Certified National Faculty for Comprehensive Trauma Life Support, Course Director for the Aesculap Academy Guidance Centre for Regional Anaesthesia, Academic Director for the postdoctoral fellowship in nerve block and pain management, Course director for the WFSA Ganga Hospital Regional Anaesthesia Fellowship. He has so far delivered 284 lectures nationally and 17 internationally and has been a faculty in 18 live workshops. Invited facutly for the World Congress of Anaesthesia 2008in South Africa, 2012in Argentina and World Congress of Regional Anaesthesia in 2014 in South Africa.



Dr R. Manikandan, Consultant Anaesthesiologist at Ganga Hospital joined in Aug 2008. He did his MD Anesthesiology(2002-2005) and senior residency (2005-2008) from the All India Institute of Medical Sciences, Delhi. He did a fellowship in Chronic pain management from the University of Western Ontario, Canada in 2010 -2011. Has presented papers in the American Society of Anesthesiologists annual meetings in 2008 and 2010 in Orlando and San Diego respectively. He has special interest in Pediatric Anaesthesia & pain management.

Dr. P. Gurumoorthi, consultant in the department of anaesthesiology joined the unit in 2008. His areas of interest are anaesthesia for patients with cardiovascular diseases and USG guided regional anaesthesia. He also has a keen interest in Paediatric regional anaesthesia.





(Standing): Dr Maheshwari, Dr Janani, Dr Vipin, Dr Ropa, Dr Vikram, Dr Aparna, Dr Bhairavi, Dr Sandeep, Dr Shikha, Dr Arun, Dr Sweety, Dr Chirag, Dr Prasanth, Dr Arun, Dr Santosh, Dr Santosh, Dr Senthil, Dr Vikram, Dr Karthik, Dr Prasad, Dr Prabhakar

Aesculap Academy Guidance Centre for Regional Anaesthesia, Germany has collaborated with the Department for providing short term training in Regional Anaesthesia. The programme was started in 2005 and so far 644 anesthesiologists from various parts of India and 44 Overseas Trainees from Nigeria, Srilanka Pakistan, Qatar, Oman, Afghanistan, Philippines & Saudi arabia, Egypt, Rwanda, Tanzania and Kenya have benefited from this programme. This is the only centre in the country which teaches peripheral nerve blocks under this programme.

#### **Clinical Research**

The department participated in a multicentric trial the ASSIST SURVEY aimed at deciphering postoperative analgesia in surgical patients. This trial included 16 centres from India, Srilanka and Bangladesh.

## Anaesthesia Courses Offered



## Anaesthesia Team

(Left to Right Sitting): Dr Sateesh, Dr Manikandan, Dr C Sekar, Dr J Balavenkat, Dr Venkateswaran, Dr Gurumoorthui, Dr Vivekandan

The Various Anaesthesia Techniques Performed 2012-14			
Year	2013	2014	
Spinal	7493	8093	
Csea	760	1495	
Ga	1991	2595	
Nerve Block	3426	4643	
Tap Block	270	290	
Epidural Steroid	84	108	
Miscellaneous	63	89	
Caudal	33	94	
Local	31	40	
Total	14151	17447	

WFSA Ganga Hospital Regional Anaesthesia International Fellowship for anaesthesiologists from Low Resource

## Administration



Dr. P. Krishnananda & Dr Ishwar Balaji

## Out-patient department Staff

The out-patient department has a good and expansive infrastructure to examine patients effectively and efficiently. Consultants are available on all the six days in the clinic and the clinic is backed by 56 support nursing staff. The clinics run from morning 8 AM to 6 PM on all six days of the week. The availability of multislice CT and 1.5 Tesla MRI and six radiological DXR units in-house allow for all required investigations to be on the same day of consultation without waiting periods.



Dr P K Krishnananda, Medical Administrative Officer and Dr Ishwar Balaji, Patient Relation Officer, ably attend to the

administrative needs of the institution. Dr Krishnananda has 13

years clinical experience in critical care and cardiac surgery and

then moved on to hospital administration with an MBA in 2010 and

PGDCR. Dr Ishwar Balaji has 12 years in clinical experience

as a dental surgeon before moving on to hospital administration.

Both together have successfully implemented the practice of core

values of the institution at all levels of staff members and have been responsible for maintaining high quality of service as per the

NABH guidelines.



# Theater Staffs & Technicians

The hospital has 20 operating theatres which are staffed with 223 highly skilled OT nurses, Anaesthesia technicians and theatre technicians. They are responsible for the maintenance of NABH standards in the theatres and are closely involved in the academic and operative courses of the department.

## Department of Physiotherapy

The department has 30 physiotherapists who work closely with the surgeons. Apart from providing service to nearly 300 in-patients and 150 outpatients a day, the team also provides training to students from many colleges. The department is well equipped with all the latest therapeutic modalities.



## Research Department

Dr. Janardhan S. Yerramshetty, Research Coordinator - joined the Ganga Hospital in 2011 as Research Coordinator. He did bachelors in biomedical engineering at Osmania University, Hyderabad and later Ph.D. in bioengineering at University of Toledo, Ohio, US. Even though his background is mainly engineering, he is connected to medical field through his research work at his Ph.D. and Post Doc institutes (Henry Ford Hospital, Detroit, Michigan). A portion of his Ph.D. thesis is printed as a book chapter through springer publications.



## Department Secretaries

Mr Mohana Krishnan, Mr G Prabhu, Mr Balakrishnan & Mrs Radha, support the department in all its academic, research and clinical activities.



## *Conference facility*

The hospital has a spacious conference center located on the sixth floor. It includes an auditorium with a seating capacity of 420 people, two meeting rooms that can seat 150 people each, a pre-conference lobby that can hold trade exhibits and a food court. This makes it the largest conference facility available in the city at present. The main auditorium allows audio visual transmission from all the major operating theaters for live surgery workshops.





Staff





## Physician Assistants

The research department has thirteen physician assistants who are actively involved in the collection of data and clinical evaluation. The team of physician assistants have completed a four year Basic course and form an integral part of the research work.



Mr G Prabhu, Mr Mohana Krishnan, Mrs Radha & Mr Balakrishnan





AIRO Intra-operative CT navigation (First unit in Asia-pacific region)

Clinical Work

**Total Computer Navigation** solutions for Orthopaedic Surgery With more than 150,000 new out-patients and 20,000 major surgeries every year, the unit stands as a leader in the field of orthopaedic surgery in this part of the world. High quality trauma care is ensured by a healthy symbiosis and collaboration between the orthopaedic, plastic, anaesthetic, neuro and faciomaxillary surgery departments.

## New Elective Out-Patient Registration

2012	2013	2014
1,54,790	1,62,289	1,89,529

## Emergency casualty attendence

2012	2013	2014
23,516	20,585	21503

## Major Orthopaedic Surgeries

2012	2013	2014
20,510	20,679	21,782

## Orthopaedic Physiotherapy patients

2012	2013	2014
33,814	37, 481	42,138

## Clinical Work

The high clinical load is well supported by excellent infrastructure facilities with 486 beds, 20 operating theatres, state-of-the art radiology department with inhouse MRI and CT scan facilities. The operating theatres have AIRO CT navigation. Computer navigation surgery platforms, 2D ISO-C 3D C-arms, Spinal cord neuro-monitoring, high end operative microscopes and state-of-the-art operative equipments all of which help to ensure the best possible results to the patients.

## Trauma Surgery



A bilateral severe open injury of legs successfully salvaged with restoration of normal function.



Sitting Left to Right: Dr. Arun Kamal, Dr. Ramesh, Dr. Dheenadhayalan, Prof Rajasekaran, Dr. Devendra, Dr Venkatadass along with the trauma team.

Ganga Hospital is a tertiary referral centre for Trauma for the region. The Unit provides consultant level input to all the patients regardless of severity of injury. The consistent increase in clinical work is a direct evidence of the confidence among the patients. Dr J Dheenadhayalan heads the Trauma Division and the quality of trauma care is audited three times a week. The trauma work load is managed round the clock by Four Trauma Associate Consultants, 12 Registrars and two trauma fellows. The availability of 11 operation theatres dedicated to trauma and Emergency Surgery and in-house trauma anaesthesia team available 24 hrs x 7 days makes it possible to do all life and limb saving surgeries immediately without any delay.

## **Upper Limb Frac**

## Year Fractures around shoulder Humerus fractures

Fractures around elbow Forearm fractures **Distal Radius fractures** Dislocations and Misc. injuries Total

### **Lower Limb Frac**

#### Year

Fractures around Hip and Pelvis Femur fractures Fractures around Knee Tibia fractures Ankle fractures Dislocations and Misc. injuries Total

### **Total Number of Fr**

Year **Upper Limb Injuries** Lower limb Injuries

Total

## Trauma Surgery

ture Fixations			
2012	2013	2014	
221	371	352	
601	355	484	
246	182	250	
623	502	861	
771	630	880	
86	160	193	
2548	2200	3020	

ture Fixations			
2012	2013	2014	
929	1285	1386	
1057	1029	1242	
849	1260	1263	
1387	1187	1824	
447	593	631	
300	112	181	
4179	5442	6526	

acture Fixations			
2012	2013	2014	
2548	2200	3020	
4179	5442	6526	
6727	7642	9546	

## Spine Surgery



Sitting L-R: Dr Rishi M Kanna, Dr S Rajasekaran, Dr Ajoy Shetty Standing L-R: Dr Harpreet, Dr Aju, Dr Chandrasekar, Dr Vibhu, Dr Sreekanth Sr, Dr Manindra, Dr Sreekanth Jr The spine unit of Ganga Hospital is one of the largest tertiary care referral centres for spinal diseases in India. The unit is headed by Prof S Rajasekaran, and comprises of Senior Consultant Dr Ajoy Prasad Shetty and Associate Consultant Dr Rishi M Kanna. The clinical team comprises of six Spine Fellows from the National Board of Examinations, one Spine Fellow of the Fellowship program of ASSI and two training fellows of The Tamilnadu Dr MGR Medical University Fellowship program. The unit is ably supported by three physician assistants and spinal physiotherapists.

The Unit has a very strong focus in Clinical and Basic Science Research. It has been the proud recipient of many national and international awards such as ISSLS award thrice in 2004, 2010 and 2012, EuroSpine Open Paper Award in 2008, Sofamer Danek award in 1996 and 2002, Silver Jubilee Research Award of MCI in 2004, and ASSI Research Awards from 2000-2014. The unit has also more than 100 journal publications in spine surgery and chapter contributions in international textbooks.

Year	2012	2013	2014
Out-patients	22,457	22845	23228
In-patients	2140	2293	2678
Surgeries	2044	2191	2574

Year	2012	2013	2014
Microdiscectomy	408	447	497
Scoliosis&kyphosis	117	120	151
Spinal Infection	28	77	60
Spondylolisthesis	294	332	416
Tumour Surgery	52	44	60
Cervical Surgery	200	336	395
Spine Fractures	330	250	271
Lumbar Canal Stenosis	193	180	209
Thoracic Myelopathy	12	17	24
Spinal Injections	123	152	197
Vertebroplasty	31	29	15
Neurosurgical Procedures	42	55	37
Biopsy	67	84	90
Miscellaneous	124	68	152
Total	2044	2191	2574

### **Safe Spine Surgery**

- Ganga hospital is the first unit in the Asia Pacific region to install the BrainLab CT AIRO navigation services for computer aided spine surgery. This ensures safety and precision.
- · Intra-operative neuromonitoring enables performance of complex spinal cord surgery without risking injury to the spinal cord.
- · Cell Saver machines enable long and complex surgeries maintaining patients' safety.
- The availability of the latest spinal implants allow safety and precision in surgery. •
- · High resolution 1.5 Tesla MRI scanner, Siemens Symphony CT scanner and digital radiographs provide the best imaging support to accurately diagnose diseases.

Spine Surgery

## Arthroplasty Unit



Sitting L-R: Dr. N. Rajkumar, Dr S Rajasekaran, Dr. P. Dhanasekara Raja Standing L-R: Dr Avinash, Dr Abishek, Dr Naveen kumar and Dr Praveen Reddy. The Arthroplasty unit has grown rapidly performing 1510 joint replacement surgeries in 2014. The Unit has three consultants Dr S Rajasekaran, Dr P Dhanasekara Raja and Dr N Rajkumar and four Arthroplasty fellows Dr Avinash, Dr Naveen kumar, Dr Praveen reddy and Dr Abishek.

The unit has exclusive ultra clean operating rooms which coupled with strict aseptic techniques and highly trained professionals allow achievement of good results of international standards. Computer navigated joint replacement surgery is routinely performed for both difficult primary and revision surgeries to obtain perfect alignment consistently. The good results obtained have made it possible for us to provide 'Ganga Joint for Life Assurance Programme' - an insurance coverage for our joint replacement patients.

Joint Replacement Surgeries			
Years	2012	2013	2014
Primary Total Knee	853	929	1130
Revision Total Knee	25	10	67
Primary Total Hip	197	229	255
Revision Total Hip	10	18	35
Shoulder and elbow	5	11	23
Total	1090	1197	1510

#### **Highlights**

- Computer navigated Joint Replacement with BrainLab Vector vision
- Four Ultra clean operating rooms for joint replacements
- Digital alignment Xrays for planning & templating
- MRI and CT based patient specific instrumentation
- High performance bearing joint replacements

The unit has adopted all recent advances to give the best functional results to the patients. Joints with newer bearing surfaces like ceramic on ceramic, modular hips with larger heads, augments for acetabular defects, rotating platforms for knee, metaphyseal sleeves for bone defects are all performed routinely in appropriate patients to achieve the best functional results.

## Arthroplasty Unit



## Shoulder and Upper Limb Unit



This 65 year old gentleman was not able to use his right upper limb in any activity following a failed fixation of the distal humerus fracture performed elsewhere. Total elbow replacement was done to provide him with a functional limb. The patient was finally able to feed himself using his right hand after 2 years.



Following a failed arthroscopic rotator cuff repair, this 77 year old patient was unable to lift his arm. Within days of undergoing Total Reverse shoulder arthroplasty, the patient is able to reach near normal range of overhead movements.



Left to Right: Dr. Arun Kamal, Dr. Ramesh P, Dr. Dheenadhayalan, Dr. Devendra, Dr K. Venkatadass

The unit led by Dr. Dheenadhayalan, manages all shoulder conditions and deformities of upper and lower limbs both congenital and acquired. The team includes 3 associate consultants and two fellows. The entire team focuses on adhering strictly to principles of evidence-based medicine and offers their patients the most current, proven techniques of management in shoulder and limb reconstruction. Advanced surgical techniques are employed to improve comfort and outcome of the patients.

Of the 600 and more shoulder surgeries done annually, Shoulder arthroscopy, open repairs, shoulder joint replacements-including reverse shoulder arthroplasty are routinely performed in improving patient's quality of life. The unit is ably backed by well equipped radiology department and a dedicated physiotherapy section with advanced pre and post operative rehabilitation protocols.

## **Surgical Pr**

Year **Bankarts Repair** Rotator Cuff Arthroscopy **Proximal Humerus Fractures Clavicle Fractures** Acromioclavicular Joint Dislocations Frozen Shoulder Arthroplasty

**Shoulder Surgeries Elbow Surgeries** Wrist Surgeries

#### Total

### **Highlights**

- · Shoulder and upper limb clinics operate twice a week in collaboration with the plastic surgery and hand department, especially in the management of brachial plexus injuries.
- Treatment is focused on conservative measures and restorative techniques through Minimally invasive surgeries, including arthroscopy.
- · Surgical options are comprehensive and matched, based on patient needs.
- · Joint replacement is employed selectively, when required.
- All surgeries and outcomes are analyzed to improve quality of care and develop new techniques for future applications

## Shoulder and Upper Limb Unit

00	cedures		
	2012	2013	2014
	29	30	21
	44	40	74
	18	50	91
	166	295	246
	38	36	70
	23	35	36
	59	65	66
	4	11	23
	381	562	626
	152	200	257
	671	392	480
	1204	1154	1363

## Arthroscopy and Sports Medicine Unit



A 28 year old female patient presented with dislocation of her right knee following an accident. She had persistent pain and instability in her knee - due to multiple ligament tears (ACL, MCL and PLC). Key hole arthroscopic ACL and PCL reconstruction with hamstring graft and open PLC repair done.



50 year old presented with full thickness supraspinatus tendon tear in the right shoulder. Key hole arthroscopic Supraspinatus repair was done using knotless suture anchor.



Sitting : Dr. S. R. Sundararajan Left to Right: Dr. Pradeep A. R, Dr. Sachin Ramesh Jain, Dr. Balaji, Dr. Ajay Singh, Dr. Nagaraja H. S The Arthroscopy and sports medicine unit of Ganga hospital is headed by Dr. S R Sundararajan. The unit is efficient in performing several complex surgeries of knee, shoulder, hip, ankle, wrist and elbow joint. Our centre has an intake of yearly one FNB (national board of examinations) and two Tamilnadu Dr MGR University Post doctoral fellow students. It is one of the two centres in India to have FNB course in sports medicine. The unit has several research publications in national and international indexed journals. We have three wellequipped operation theatres with experienced theatre staff. All procedures are performed based on current clinical evidence as well as implants used are of best quality available internationally at a very affordable cost. For rehabilitation, we have experienced physiotherapists who help to get back the patient to normal activities.

## **Arthroscopy and Sp**

#### Year

#### Knee

ACL Reconstruction ACL avulsion fixation PCL Reconstruction/fixation **Complex Multiple ligament Reconstruction** Partial Meniscectomy Cartilage injuries (Mosiacoplasty, ACT, Microfracture) Patellar instability (MPFL reconstruction, TT transfer) Miscellaneous procedures

#### Shoulder

Bankarts repair Rotator cuff repair Impingement syndrome (decompression) SLAP repair Miscellanous Hip arthroscopy Ankle arthroscopy Wrist arthroscopy

#### TOTAL

#### **Highlights**

- Competent Arthroscopic surgical team.
- Fully furnished operation theatre
- Advanced arthroscopic equipment
- Specialized Musculoskeletal radiologists and physiotherapists

Comprehensive post operative rehabilitation for all Sports and Ligament injuries are guided by an exclusive team comprising of 19 trained physio-therapists. The Unit also conducts international and national level meetings in Sports Medicine and Arthroscopy & Training Courses and Workshops for Physiotherapists

## Arthroscopy and Sports Medicine Unit

orts	Medicin	e Unit	
	2012	2013	2014
	380	401	436
	4.0	31	35
	13	14	18
L	11 494	15 164	21 450
	121	104	102
		10	10
		8	12
	63	99	60
		40	45
		19	40 26
		13	6
		0	2
		2	2
		0	1
		2	3
		1	5
	588	798	844

## Paediatric Orthopaedics



"Osteogenesis imperfecta" is a disease in which the bones are brittle and child sustains repeated fractures since birth. The disease may result in grotesque deformity and can be crippling as the child grows up.

12 yrs old Santosh was one such patient who came to us bed-ridden with servere deformity. After multiple staged reconstructive procedures and appropriate medical management he was back on his feet and is attending his school regularly now.



Dr BRW Armstrong, Dr. K. Venkatadass, Dr Vetri Ganapathy, Dr Muthukumar

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The paediatric orthopaedic unit led by Dr Venkatadass, deals with the musculoskeletal problems of children. A child is definitely not a 'small adult'; the tender musculoskeletal system behaves different from that of an adult. Moreover, they have growth potential which needs to be preserved for them to become mature adults. All these make children so special and thus the need for trained specialists to make sure that they get the best possible care.

Any musculoskeletal problem, be it a congenital deformity (birth defect), a fracture involving the growth plate or an infection can cause alteration in growth and deformity. Timely identification of the problem and right intervention will go a long way in preventing long-term disability.

#### **Paediatric Or** Year 2011 Trauma 540 CTEV - Ponseti 78 **CTEV** - Surgery 15 Cerebral Palsy 73 **Hip Preservation** 21 Deformities 61 Infection 21 Tumours \_ Miscellaneous 31 Total 840

#### **Services Offered:**

**Deformity correction** Limb lengthening Cerebral palsy care **Paediatric Trauma** 

**Hip Preservation** 

### Paediatric Trauma Services

### **Hip Preservation**

Hip Preservation Surgery is a new concept developed to preserve the native hip to its maximum function and postpone arthritis. Femoroacetabular impingement (FAI) and Hip Dysplasia are two leading causes of early arthritis and there are advanced surgeries available now to restore the normal anatomy and biomechanics of hip and thereby preserve its function.

## Paediatric Orthopaedics



'Club foot', the most common congenital deformity in children being treated by *manipulation & plaster casting* (Ponseti technique)

thopaed	ics	
2012	2013	2014
664	650	915
43	44	54
12	44	31
56	52	89
27	52	63
33	69	80
28	25	21
-	30	29
66	85	75
929	1051	1357

Paediatric trauma forms the major chunk of the workload of the unit. 24 x 7 care is available to treat childrens fractures with utmost care to get the best result and put them back into action as early as possible.



## **INTERNATIONAL AWARDS - 3 NATIONAL AWARDS** - 17





### **Orthopedic Association Of** South India States (OASIS) Lifetime **Achievement Award 2012**

Orthopedic Association of South India States (OASIS) has honoured Prof. Dr. M.V. Daniel, Academic Director of Ganga Hospital in appreciation of his contribution in the field of orthopaedic surgery and for motivating many teachers and students with dedication and sincerity" in Bangalore during OASISCON 2012



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## Awards 2013-14

### **ISSLS Basic Science Award**

Prof S Rajasekaran and his team of spine doctors won the ISSLS Basic Science Research Award for their work on identifying the anatomical weak point in the lumbar inter-vertebral disc in patients with slipped disc disease. Dr S Rajasekaran received the ISSLS Best Spine Research Award on 17th May 2013 in the Annual Meeting of the International Society for the Study of Lumbar Spine (ISSLS) conducted in Scottsdale, USA.



### **ISSLS Best Presentation** Award - 2014

Prof S Rajasekaran won the Best Oral Presentation 2014 (The MacNab/Larocca Fellowship Award for Lumbar Spine Research 2014) at the Annual Meeting of ISSLS, Seoul, Korea, Jun 3-7, 2014 for the work on Accelerated DDD in young adults is associated with polymorphisms in MMP 7, CALM 1 and Cox 2 genes Analysis of 58 single Nucleotide Polymorphisms in 580 individuals based on Total Degenerative Disc Score.

## Awards 2013-14

#### **Indian Orthopaedic Association** Silver Jubilee Oration - 2014

Dr Rishi Kanna, Associate Consultant Spine Surgeon, was awarded the Indian Orthopaedic Association Silver Jubilee Oration for his research work on Modic Vertebral Endplate Changes - Prevalence, Patterns and Genetic Association Analysis of 71 genetic polymorphisms, held in Hyderabad, November 2014.



## **ASSI Basic Science Research Award 2014**

gricultura

Prof S Rajasekaran won the ASSI Basic Research Award 2014 at the Annual Meeting of the Association of Spine Surgeons of India, Kolkatta, for the work on MMP 7, CALM 1 and Cox 2 genes influence genetic susceptibility of lumbar degenerative disc disease in young adults -Analysis of 58 single nucleotide polymorphisism in 580 individuals based on Total Degenerative Disc Score.

#### **Prof A A Mehta Medal - Indian Orthopaedic Association Conference 2013**

Dr Devendra Agraharam, Associate Consultant Trauma Surgeon at Ganga Hospital, won the Prof A A Mehta Medal. His topic of research was on "Single stage reconstruction of bone defects of Long bones using Gamma irradiated structural Allografts".





#### **Indian Orthopaedic Association Young Ambassador Award - 2013**

Dr Rishi Kanna, Associate Consultant Spine Surgeon at Ganga Hospital was selected as the Young Ambassador by the Indian Orthopaedic Association to attend the Hong Kong association meet for the year 2013. He was selected to attend the Annual Hongkong Orthopaedic Association meeting held in Hongkong Convention centre on November 23-24, where he presented his research work on pediatric cervical pedicle morphometric study.



### **Best Case Presentation Award in** Arthroplasty - 2013

Dr P Dhanasekara Raja, Consultant Orthopaedic Surgeon-Arthroplasty & Trauma Surgery, has won the Best case presentation award for "A Challenging Hip Case" at Indian Arthroplasty Association Annual Meeting held at Jaipur, 15th - 17th, November, 2013.



### **IOA Basic Science Research Award - 2013**

Dr Rishi M Kanna, Associate consultant spine surgeon, receiving the Dr RC Rallan Best Basic Research Award at the IOA conference held in Agra, 2013, for the work on Quantification of neuronal injury in cervical spine injury patients - Diffusion tensor imaging (DTI) of 35 cervical spine injury patients at Indian Orthopaedic Association meeting 2013, Agra

## Awards 2013-14

### **Professional Achievement Award Spot Hospital 2014**

Dr J Dheenadhayalan was awarded the professional achievement award by the SPOT Hospital, Chennai for his exemplary work in the field of trauma surgery and orthopaedics in 2014.



## **ASSI Basic Science Research Award - 2013**

Dr Vishnu Prasath, Fellow in Spine Surgery, Ganga Hospital won the best basic science research award at the Annual conference of the Association of Spine Surgeons of India, held at Cochin, Kerela, for the work on Diffusion Tensor imaging in cervical myelopathy.



## Awards 2013-14



### **Dr Venkat Rao Oration - Award Indian Society Of Anaesthesiologists**

Dr Balavenkat, Senior Consultant Anaesthesiologist, delivered the prestigious Dr Venkat Rao Oration for the year 2014 at the National Annual Conference of Indian Society of Anaesthesiologists, Madurai, 27th December, 2014.

### Dr Joy Patankar Gold Medal, **Indian Orthopaedic Association 2014**

Dr Venkatadass, Associate Consultant in pediatric orthopaedics won the Dr Joy Patankar Gold Medal, IOACON 2014 for his work on :Modified Dunn's Procedure - Is it a safe bet for treating severe slipped capital femoral epiphysis?"





### **Prof Ramanathan Consultant Gold Medal - Tamil Nadu Orthopaedic Association 2014**

Dr Sundarajan, Consultant in Sports Medicine, won the Prof Ramanathan Consultant Gold medal - TNOA 2014, Chennai for the topic Management of Charcots joint in ankle and hindfoot. Is it still a challenge?

### **Indian Orthopaedic Association RC Rallan Gold Medal - 2013**

Dr Ramesh Perumal, Associate Consultant Trauma Surgeon at Ganga Hospital, won the RC Rallan Gold medal for Best Basic Science Research. His topic of research was 'Biochemical markers(serum lactate and Interleukin-6) in open injuries Can they predict timing of reconstruction'





#### Prof P. Dhanarajan Gold Medal -**Tamil Nadu Orthopaedic Association 2013**

Dr. Dheenadhayalan, Senior Consultant Orthopaedic Surgeon won the P. Dhanarajan Gold medal in TNOACON 2013 for innovation in trauma for the work on "Good Outcome by An Innovative hybridization in difficult and complex distal shaft humerus fractures at junctional zone of shaft and columns of distal humerus"



cases.

### **IOA Prof Joy Patankar Medal - 2013**

Dr Gowri Shankar, Registrar at Ganga Hospital won the Prof Joy Patankar medal for post-graduates for the presentation "Is Prone position ideal for Manipulation and pinning of Paediatric Supracondylar humerus fractures? A Randomised Controlled Trial".



## **Prof M Natarajan Gold Medal, TNOA 2013**

Dr Manjunatha, post-graduate student in Orthoapedics won the Prof M Natarajan Gold Medal, TNOACON 2013 for the topic, "Does elastic nailing for paediatric forearm fractures make a difference?"

## Awards 2013-14

### **ASSI Publication Award 2013**

Prof S Rajasekaran received the ASSI publication award for the maximum number of publications related to spine surgery in the academic year 2013 at the Annual Meeting of the Association of Spine Surgeons of India, Cochin, Kerala



### Prof Ramanathan Consultant Gold Medal -**Tamil Nadu Orthopaedic Association 2013**

Dr Sundarajan, Consultant in Sports Medicine, won the Prof Ramanathan Consultant Gold medal -TNOA 2013, Tanjore for the research work on MPFL reconstruction in patellar instability using double bundle semitendinosisautograft-A prospective series of 17



Dr J G Shanmuganathan Chairman-Ganga Hospital

**Dr Ramkumar Raghupathy** Dean, GKNM Hospital, Coimbatore

**Dr Vinu Aram** Director-Shanti Ashram, Coimbatore



The University of Hong Kong Selective Nucleotide Polymorphism analysis for genetic study



**University of Delhi, India** Disease.



**Rush University, Chicago** Functional Element Model Analysis of Post Tubercular Deformity

**Cotrel Foundation, Paris** Role of Mechanical stress on the causation of disc degeneration - scoliotic disc study

SIEMENS

**Siemens India** Analysis.



**Microlab**, Coimbatore



Study on Open Injuries



Tamilnadu Agricultural University, Coimbatore disc specimens



**Institutional Review Board (IRB)** 

(Registered with US Department of Health & Human Services) Regn No. IRB 00004503

Medical research is highly regulated and has to strictly follow the medical ethics and good clinical practices laid down by regulatory authorities. At Ganga Hospital, all research methodologies are approved by an institutional review board formed by eminent members of the society.

### Chairman **Prof M V Daniel**

**Prof Dr Balasubramanian** TNAU, Coimbatore

Research

#### Deputy Chairman **Prof S Rajasekaran**

- Sreejaya Nambiyar Senior Advocate, Coimbatore
- **Dr Ajoy Shetty** Consultant - Ganga Hospital, Coimbatore
- **Dr J Dheenadhayalan** Consultant - Ganga Hospital, Coimbatore
- Member, Secretary **Dr Janardhan Yerramshetty** Consultant - Ganga Hospital, Coimbatore

#### **Research Collaborations**

Ganga Hospital has established collaborations with internationally recognized research institutions

- Biochemical analysis for apoptosis and pro-inflammatory cytokines in Disc Degenerative
- Diffusion Tensor Imaging studies of Spinal cord, Functional MRI studies and Disc diffusion
- Histopathological analysis for microstructural changes in Disc Degenerative Disease.

#### Tromsoe Mine Victim Resource Center, University Hospital of Northern Norway

Molecular Biology Analysis - Isolation of DNA from blood samples and proteomic analysis of

### **Ganga Orthopaedic Research & Education Foundation**

## (GOREF)



Dr. S. Rajasekaran PhD., Managing Trustee

### **RESEARCH ADVISORY BOARD:**

**Prof M.V. Daniel** Former Professor & HOD, Dept of Orthopaedics CMC Medical College, Vellore.

#### **Dr P. Balasubramanian PhD**

Director, Centre for plant molecular biology Tamilnadu agricultural University, Coimbatore - 641003.

#### **Prof. V R Ravikumar**

Former Professor of Paediatric Surgery Coimbatore Medical College Hospital.

Dr Krishna Venkateswaran **Consultant Pathologist** Microbiological Laboratory, Coimbatore

#### **Prof Kenneth MC Cheung**

Clinical Professor, Deputy Chief, Division of Spine Surgery, The University of Hong Kong.

#### Dr. Dilip K Sengupta MD

Ast. Prof. ,Dept of Orthopaedic Surgery, Dartmouth Hitchcock Medical Centre, United States of America.

The Ganga Orthopaedic and Research Education Foundation (GOREF), was established in August 2002 to facilitate research in spine and orthopaedic surgery. The foundation was setup by a large personal donation by Dr S Rajasekaran.

GOREF is approved by Department of Scientific and Industrial Research (DSIR), a department under Ministry of Science & Technology, Government of India in recognition to the high quality research conducted. The foundation has now grown in strength and added to its credit various activities such as academic training of surgeons and paramedical staff, organizing scientific meetings and conferences, funding on-going research activities of the department.

The foundation has also taken up social responsibilities. It provides funds to the 'Project Helpline' (a project to support surgical correction of physical deformities in poor children), Projects under 'SWASAM' a social initiative inaugurated by Shri. APJ Abdul Kalam and primary education of under privileged children.

GOREF also supported the establishment and running of Ganga Spine Rehabilitation Centre at a cost of Rs.3 Crores which provides subsidised or free rehabilitation to spinal cord injured patients.

#### Diffusion Tensor Imaging (DTI) as a novel method for assessing spinal cord at tract level.

- IOA Golden Jubilee Commemoration Lecture Award
- Neuro Spine Conference Best e-poster Aaward, Chennai
- IOACON Basic Science Research Award

Conventional MRI assesses the spinal cord as a whole and does not evaluate the spinal cord at the tract level. Hence it is not useful in accurate assessment or prognostication of acute or chronic injuries. DTI is a new and emerging technique which can assess individual tracts by following the movement of water molecules. This technique has been used widely in the imaging of brain but not in the spinal cord. Our study was aimed at evaluating the sensitivity and specificity of this technique in assessing the extent of damage to the tracts of the spinal cord in both acute injuries and chronic compressive myelopathies.

We are also aiming to document the DTI data metrics of various parameters like FA and ADC values at various levels of the cervical spinal cord and in different age groups. We obtained grants from Department of Biotechnology (DBT), a department of Ministry of Science and Technology, Government of India and AOSpine, Asia Pacific, to support the study.

#### The anatomy of failure in Lumbar disc herniation - An in vivo, multimodal, prospective study of 181 subjects

Study Team: S. Rajasekaran , Nipun Bajaj , Vijay Tubaki , Rishi M. Kanna and Ajoy Prasad Shetty

ASSI Best Research Award

Although in vitro mechanical disruption studies have implicated both the endplate junction (EPJ) and the annulus fi brosus (AF) as the site of failure in LDH, there are no in vivo human studies to document the exact anatomy of failure. 181 patients requiring microdiscectomy were evaluated by plain radiograph, thin slice computed tomographic scan, plain and contrast magnetic resonance imaging, intraoperative examination, and histopathological analysis. Results showed that LDH due to EPJ failure (EPJF-type I herniation) was more common (117; 65%). The EPJF was evident radiologically as vertebral corner defect in 30 patients, rim avulsion in 46, frank bony avulsions in 24, and avulsion at both upper and lower EP in 4. Our study provides the first in vivo evidence that LDH in humans is more commonly the result of EPJF than AF rupture.



Four types of end plate junction failure in lumbar disc herniation

## Research



Figure: Texturography images of two cervical myelopathic patients, who improved after surgery (on the top) and who did not improve post-surgery (on the bottom). Patient's pre surgery images are on the left side, respectively



#### Modic Vertebral Endplate changes - Prevalence, Patterns and Etiologic Genetic Association Analysis of 71 Genetic Polymorphisms in 809 patients

Study team: S. Rajasekaran, Rishi M Kanna, Ranjani Raja Reddy, Natesan Senthil, Muthuraja Raveendran, Kenneth MC Cheung, Danny Chan, Patrick YP Kao, Ajoy Prasad Shetty

#### Prof A Subramanian Best Research Paper Award

Modic changes (MC) are vertebral end plate signal changes observed in sagittal magnetic resonance imaging sequences. As the true significance of MC is not known, the present study was performed to evaluate the prevalence of MC and the role of genetic polymorphisms in 40 candidate genes (including 71 SNPs). Results showed that there were 809 individuals and based on the presence of MC, the total population was divided into 702 controls and 107 cases. Modic changes were identified in 251 endplates among the 1070 endplates. L4-5 endplates were the most commonly affected level (n=77, 30.7%) followed by L5-S1 (n=66, 26.3%), L3-4 (n=60, 23.9%) and others. The rs2228570 SNP of Vitamin D receptor (VDR) gene (p=0.02) and rs17099008 SNP of Matrix Metallo proteinase (MMP 20) (p = 0.03) were significantly associated with MC, which has not been reported previously.



Type 1 Modic Changes of the lumbar spine

#### The assessment of neuronal status in normal and cervical spondylotic myelopathy using diffusion tensor imaging.

Study team; Rajasekaran S, Yerramshetty JS, Chittode VS, Kanna RM, Balamurali G, Shetty AP. • IOA Golden Jubilee Award 2010

Magnetic resonance imaging is the current "gold standard" in the assessment of cord status in CSM; however, various parameters such as extent of compression and presence of signal intensity changes do not correlate well with clinical status. A prospective analysis of DTI datametrics collected from control and patients with cervical spondylotic myelopathy was performed to study the use of DTI in CSM. Patients with CSM (n = 35) and 40 normal individuals were included. Results showed that there was significant difference in DTI datametrics between patients with myelopathy and control (P < 0.05), with decrease in fractional anisotropy ( $0.49 \pm 0.081$  vs.  $0.53 \pm 0.07$ ) and increase in apparent diffusion coefficient ( $1.8 \pm 0.315$ vs. 1.44  $\pm$  0.145) and eigenvalues.



Different patterns of tractography of cervical spinal cord in normal person (a), and patients with cervical myelopathy – waisting (b), partially interrupted (c), or completely interrupted (d)

#### Multilevel Non-contiguous Spinal Injuries – Incidence and Patterns based on Whole Spine MRI

Study Team: Chandrasekhar Gaike, Rishi M Kanna, Ajoy P Shetty, S Rajasekaran ASSI Best Basic Science Research Award

Multi-level non-contiguous spinal injuries are not uncommon and their incidence varies from 1.6 to 77% depending on the type of imaging modality used. The efficacy of whole spine MRI in detecting asymptomatic significant vertebral fractures is not known. Consecutive spinal injury patients treated between 2011 and 2013 were retrospectively evaluated based on clinical and radiographic records. Among 484 patients, ninety five (19.62%) patients had multilevel injuries including 86 (17.76%) with non-contiguous injuries. Five common patterns of non-contiguous spinal injuries were observed. Whole spine MRI scan detected 24 (28.6%) missed secondary injuries of which 5 were unstable.



Five different patterns of non-contiguous spinal injuries

#### Is Prone Position Ideal for Manipulation and Pinning of Displaced Pediatric Extension-type Supracondylar Fractures of Humerus?: A Randomized Control Trial.

Study Team: Venkatadass K, Balachandar G, Rajasekaran S. • Dr Joy Patankar Gold Medal, IOACON 2013

Closed reduction and percutaneous pin fixation is the standard of care for displaced supracondylar fractures of humerus in children. Although it is routinely performed in supine position, some authors recommend prone position to be advantageous as it aids in gravity reduction and avoids elbow hyperflexion. 52 children with acute, grade III supracondylar humerus fractures without vascular injury were included in the study. They were grouped into prone (n=26) and supine (n=26). Results showed that there was no significant difference between the 2 groups in the duration of procedure (P=0.422), number of radiation exposure (P=0.470), attempts at closed reduction (P=0.904), and attempts for pinning (P=0.745) and the final clinical and radiologic outcomes.



Prone and supine positioning for children with supracondylar fractures



#### Genetic basis of degenerative lumbar disc disease in Indian population • ASSI – Basic Science Research Award – 2011

There is growing opinion that disc degeneration has more genetic basis than environmental factors. All the genetic studies performed so far were in the Chinese, Japanese and Finnish population and there were no studies on Indian population which accounts for 1/6th of the world population. This project aims to study the effects of genetics in the Indian population and to find the association of 57 SNP's within highly selected phenotypes. The study included 1000 cases and 400 controls and is being conducted in collaboration with Genetics department of the Tamil Nadu Agricultural University and the University of Hong Kong who have good expertise in this field.



#### Incidence and Impact of Low back pain and lumbar spine disorders in patients undergoing total knee replacement

Dr. P. Dhanasekararaja, Dr Harsha G, Prof. S. Rajasekaran

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64 year old patient with bilateral osteoarthritis of the knee joints. Screening radiographs and MRI of the spine shows a degenerative spondylolisthesis and canal compression

## International Publications Published From Recent Research Works

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## BONE & JOINT **JOURNAL**





Dr J G Shanmuganathan Chairman-Ganga Hospital

**Dr Ramkumar Raghupathy** Dean, GKNM Hospital, Coimbatore

**Dr Vinu Aram** Director-Shanti Ashram, Coimbatore



The University of Hong Kong Selective Nucleotide Polymorphism analysis for genetic study



**University of Delhi, India** Disease.



**Rush University, Chicago** Functional Element Model Analysis of Post Tubercular Deformity

**Cotrel Foundation, Paris** Role of Mechanical stress on the causation of disc degeneration - scoliotic disc study

SIEMENS

**Siemens India** Analysis.



**Microlab**, Coimbatore



Study on Open Injuries



Tamilnadu Agricultural University, Coimbatore disc specimens



**Institutional Review Board (IRB)** 

(Registered with US Department of Health & Human Services) Regn No. IRB 00004503

Medical research is highly regulated and has to strictly follow the medical ethics and good clinical practices laid down by regulatory authorities. At Ganga Hospital, all research methodologies are approved by an institutional review board formed by eminent members of the society.

### Chairman **Prof M V Daniel**

**Prof Dr Balasubramanian** TNAU, Coimbatore

Research

#### Deputy Chairman **Prof S Rajasekaran**

- Sreejaya Nambiyar Senior Advocate, Coimbatore
- **Dr Ajoy Shetty** Consultant - Ganga Hospital, Coimbatore
- **Dr J Dheenadhayalan** Consultant - Ganga Hospital, Coimbatore
- Member, Secretary **Dr Janardhan Yerramshetty** Consultant - Ganga Hospital, Coimbatore

#### **Research Collaborations**

Ganga Hospital has established collaborations with internationally recognized research institutions

- Biochemical analysis for apoptosis and pro-inflammatory cytokines in Disc Degenerative
- Diffusion Tensor Imaging studies of Spinal cord, Functional MRI studies and Disc diffusion
- Histopathological analysis for microstructural changes in Disc Degenerative Disease.

#### Tromsoe Mine Victim Resource Center, University Hospital of Northern Norway

Molecular Biology Analysis - Isolation of DNA from blood samples and proteomic analysis of

### **Ganga Orthopaedic Research & Education Foundation**

## (GOREF)



Dr. S. Rajasekaran PhD., Managing Trustee

### **RESEARCH ADVISORY BOARD:**

**Prof M.V. Daniel** Former Professor & HOD, Dept of Orthopaedics CMC Medical College, Vellore.

#### **Dr P. Balasubramanian PhD**

Director, Centre for plant molecular biology Tamilnadu agricultural University, Coimbatore - 641003.

#### **Prof. V R Ravikumar**

Former Professor of Paediatric Surgery Coimbatore Medical College Hospital.

Dr Krishna Venkateswaran **Consultant Pathologist** Microbiological Laboratory, Coimbatore

#### **Prof Kenneth MC Cheung**

Clinical Professor, Deputy Chief, Division of Spine Surgery, The University of Hong Kong.

#### Dr. Dilip K Sengupta MD

Ast. Prof. ,Dept of Orthopaedic Surgery, Dartmouth Hitchcock Medical Centre, United States of America.

The Ganga Orthopaedic and Research Education Foundation (GOREF), was established in August 2002 to facilitate research in spine and orthopaedic surgery. The foundation was setup by a large personal donation by Dr S Rajasekaran.

GOREF is approved by Department of Scientific and Industrial Research (DSIR), a department under Ministry of Science & Technology, Government of India in recognition to the high quality research conducted. The foundation has now grown in strength and added to its credit various activities such as academic training of surgeons and paramedical staff, organizing scientific meetings and conferences, funding on-going research activities of the department.

The foundation has also taken up social responsibilities. It provides funds to the 'Project Helpline' (a project to support surgical correction of physical deformities in poor children), Projects under 'SWASAM' a social initiative inaugurated by Shri. APJ Abdul Kalam and primary education of under privileged children.

GOREF also supported the establishment and running of Ganga Spine Rehabilitation Centre at a cost of Rs.3 Crores which provides subsidised or free rehabilitation to spinal cord injured patients.

#### Diffusion Tensor Imaging (DTI) as a novel method for assessing spinal cord at tract level.

- IOA Golden Jubilee Commemoration Lecture Award
- Neuro Spine Conference Best e-poster Aaward, Chennai
- IOACON Basic Science Research Award

Conventional MRI assesses the spinal cord as a whole and does not evaluate the spinal cord at the tract level. Hence it is not useful in accurate assessment or prognostication of acute or chronic injuries. DTI is a new and emerging technique which can assess individual tracts by following the movement of water molecules. This technique has been used widely in the imaging of brain but not in the spinal cord. Our study was aimed at evaluating the sensitivity and specificity of this technique in assessing the extent of damage to the tracts of the spinal cord in both acute injuries and chronic compressive myelopathies.

We are also aiming to document the DTI data metrics of various parameters like FA and ADC values at various levels of the cervical spinal cord and in different age groups. We obtained grants from Department of Biotechnology (DBT), a department of Ministry of Science and Technology, Government of India and AOSpine, Asia Pacific, to support the study.

#### The anatomy of failure in Lumbar disc herniation - An in vivo, multimodal, prospective study of 181 subjects

Study Team: S. Rajasekaran , Nipun Bajaj , Vijay Tubaki , Rishi M. Kanna and Ajoy Prasad Shetty

ASSI Best Research Award

Although in vitro mechanical disruption studies have implicated both the endplate junction (EPJ) and the annulus fi brosus (AF) as the site of failure in LDH, there are no in vivo human studies to document the exact anatomy of failure. 181 patients requiring microdiscectomy were evaluated by plain radiograph, thin slice computed tomographic scan, plain and contrast magnetic resonance imaging, intraoperative examination, and histopathological analysis. Results showed that LDH due to EPJ failure (EPJF-type I herniation) was more common (117; 65%). The EPJF was evident radiologically as vertebral corner defect in 30 patients, rim avulsion in 46, frank bony avulsions in 24, and avulsion at both upper and lower EP in 4. Our study provides the first in vivo evidence that LDH in humans is more commonly the result of EPJF than AF rupture.



Four types of end plate junction failure in lumbar disc herniation

## Research



Figure: Texturography images of two cervical myelopathic patients, who improved after surgery (on the top) and who did not improve post-surgery (on the bottom). Patient's pre surgery images are on the left side, respectively



#### Modic Vertebral Endplate changes - Prevalence, Patterns and Etiologic Genetic Association Analysis of 71 Genetic Polymorphisms in 809 patients

Study team: S. Rajasekaran, Rishi M Kanna, Ranjani Raja Reddy, Natesan Senthil, Muthuraja Raveendran, Kenneth MC Cheung, Danny Chan, Patrick YP Kao, Ajoy Prasad Shetty

#### Prof A Subramanian Best Research Paper Award

Modic changes (MC) are vertebral end plate signal changes observed in sagittal magnetic resonance imaging sequences. As the true significance of MC is not known, the present study was performed to evaluate the prevalence of MC and the role of genetic polymorphisms in 40 candidate genes (including 71 SNPs). Results showed that there were 809 individuals and based on the presence of MC, the total population was divided into 702 controls and 107 cases. Modic changes were identified in 251 endplates among the 1070 endplates. L4-5 endplates were the most commonly affected level (n=77, 30.7%) followed by L5-S1 (n=66, 26.3%), L3-4 (n=60, 23.9%) and others. The rs2228570 SNP of Vitamin D receptor (VDR) gene (p=0.02) and rs17099008 SNP of Matrix Metallo proteinase (MMP 20) (p = 0.03) were significantly associated with MC, which has not been reported previously.



Type 1 Modic Changes of the lumbar spine

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#### THE

## BONE & JOINT **JOURNAL**





## Academics

Academics has been one of the strong pillars of Ganga Hospital and the high academic standards has helped to place Coimbatore in the world map of training centres in both orthopaedics and plastic surgery. The institution was one of the first in the country to be recognised for orthopaedic post graduate training by the National Board and the first for super speciality training in spine surgery. The orthopaedic unit also is recognised for PhD in orthopaedic surgery and runs numerous fellowships which are fiercely competed for both nationally and internationally.

## Courses



- National Board of Examinations, New Delhi • DNB Orthopaedic Surgery
- FNB Spine Surgery
- FNB Trauma Surgery
- FNB Sports Medicine



#### The Tamilnadu Dr MGR Medical University, Chennai.

- Ph.D in Orthopaedic Surgery
- Fellowship in Arthroplasty
- Fellowship in Spine Surgery
- · Fellowship in Limb Reconstruction Surgery
- Fellowship in Arthroscopy
- · Fellowship in Pediatric Orthopaedics
- · Fellowship in Regional Anaesthesia



#### **University of Madras, Chennai**

• Ph.D in Biotechnology and Biochemistry

#### **Ganga Institute of Health Sciences**

- Diploma in Nursing & Midwifery
- B.Sc., Nursing
- Post Basic B.Sc., Nursing
- B.Sc., Physician Assistant (Emergency and Trauma Management)





Academic Director **Prof M V Daniel** 



The unit is very popular for its academic excellence and is a sought after center for training in orthopaedics and its sub-specialities. Teaching and training young surgeons has been a tradition of the unit. The academic activities are supervised by the Academic Director Prof M V Daniel, Former Head of Department of Orthopaedic Surgery, CMC, Vellore and guided by Dr S Rajasekaran, Clinical Director. Prof Daniel is also the Chairman of the Institutional Review Board of the Institution.

Ganga Hospital was one of the first centers to start DNB in Orthopaedic surgery way back in 1997. Since then more than 150 orthopaedic surgeons have been trained from the institution. This was the first unit in the country to be recognized by the national board to start FNB in Spine Surgery & Trauma Surgery. Recently the Department of Sports Medicine got the accreditation to start FNB in Sports Medicine.

## D.N.B Postgraduates and Post MS Fellows

#### **D.N.B Postgraduates 2013** Dr Kiran Chandran

Dr Rahul Dr Nibukurian

**Prof S Rajasekaran** 



**DNB** Co-ordinator **Dr Ajoy Shetty** 



**DNB** Co-ordinator **Dr Venkatadass K** 

#### Dr Santosh Dr Vishal Dr Phanikumar

- Dr Karunakar Reddy
- Dr. Vetri Chelvan S
- Dr Praveen Kumar Khot
- Dr Mohammed Shafeer
- Dr Harsha G.N.
- Dr Rizwan Basha Z

### **FNB Spine Fellows**

- Dr. Neeraj Gupta
- Dr. Om Prakash Narayan
- Dr. Suresh Subramani
- Dr. Siddharth Iyer Dr. Gurudip Das

**ASSI Spine Fellows** Dr. Kanniappan

### **Dr MGR University Fellows**

Dr. Omprakash Gupta (Spine) Dr. Navdeep Lokare (Spine) Dr. Raviprakash(Arthroplasty) Dr. Khalid Muzzafar (Limb Reconstruction) Dr. Siddharth Pigilam (Limb Reconstruction)

### **Ganga Hospital Fellowship**

Dr. Jayanta Kumar Baidya (Arthroplasty) Dr. Pankaj R Chakradhare (Trauma) Dr. Ramakanth (Trauma)





#### **D.N.B Postgraduates 2014**

- Dr Srinivas Kandula Dr A Kiran Kumar Dr. Avula Srinivasa Reddy Dr. Srikesh Ravi Dr. Manoj Kumar Dwivedi Dr. G.T.Saiprasanth Dr. Sijad V.P Dr. Jerin.J.Vadakkan Dr. Kamaatchiprabu Dr. Joydeep Mallik
- Dr. Avinash C.K

#### **FNB Fellows**

Dr. Vibhu Krishnan V (Spine) Dr. Sreekanth Reddy Rajoli (Spine) Dr. Santhosh Ram Gaddam (Trauma) Dr. Ajay Singh (Sports Medicine)

#### **ASSI Spine Fellows**

Dr. Chandrasekar Gaike Dr. AjithKumar

#### **Dr MGR University Fellows**

Dr. Harpreet Singh (Spine) Dr. Sachin Ramesh Jain (Arthroscopy) Dr. A.R. Pradeep (Arthroscopy) Dr. Naveen Kumar S (Arthroplasty) Dr. Abishek K.M (Arthroplasty) Dr Vetri Ganapathy (Limb Reconstruction)

## Publications & Presentations

Department Publications and Presentations	
International Publications	
International Presentations	
Total Text Book Chapters 47	

	2013 - 2014	
Publicat	tions	
Present	ations	327
Text Boo	ok Chapters	10



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## **Publications**











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- 13. S Rajasekaran , S Raja Sabapathy, J Dheenadhayalan, S R Sundararajan, Venkatramani H, Devendra A, Ramesh P, K P Srikanth . Ganga Hospital Open Injury Score in Management of Open Injuries. Accepted for Publication in the European Journal of Trauma and Emergency Surgery 2014.
- 14. K Venkatadass, Balachandar Gopalan, S Rajasekaran , "Is prone position ideal for manipulation & pinning of displaced pediatric extension type supracondylar fractures of humerus? A randomized control trial". Accepted for Publication in Journal of Pediatric Orthopedics 2014.
- 15. Raja Sabapathy S, Venkatramani Hari, Dheenadhayalan J, Devendra A, Rajasekaran S, Reconstruction of Post-traumatic Long Segment Bone Defecs of the Lower end of Femur by Free Vascularised Fibula combined with Allograft (Modified Capanna's Technique) Accepted for Publication in European Journal of Trauma and **Emergency Surgery**
- 16. Ajoy Prasad Shetty, S.Rajasekaran, Posterior Single Stage Hemivertebra Excision with Transpedicular Instrumentation. Journal of Spine Research, Volume 5, No.3, 2014
- 17. Mandeep S Dhillon, Rajasekaran S, Parag Sancheti. Status of Road Safety and Injury Burden: India . J Orthop Trauma Vol 28, Number 6 , June 2014, S43-44
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- 19. Veera Ranjani R, Sreemol G, Raveendran M, Senthil N Ganeshan, R Rishi M K, Rajasekaran S. Intervertebral Disc Proteome Database in Human (TNAUPDB -Human Proteome), Current Trends in Biotechnology and Pharmacy. Vol 8 (4) 423-427 October 2014, ISSN 0973-8916(Print), 2230-7303 (Online)











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- 21. Sundararajan SR, Srikanth KP, S Rajasekaran: Neglected patellar tendon ruptures - a simple modified reconstruction using hamstrings tendon graft. Int Orthop. 2013 Nov; 37(11):2159-64
- 22. Tubaki VR, Rajasekaran S, Shetty AP. Effects of using intravenous antibiotic only versus local intrawound vancomycin antibiotic powder application in addition to intravenous antibiotics on postoperative infection in spine surgery in 907 patients. Spine J 2013 Dec 1;38(25):2149-55.
- 23. Rajasekaran S. Grand Rounds case "A large tuberculosis abscess causing spinal cord compression of the cervico-thoracic region in a young child" Eur Spine J. 2013 Jul;22(7):1464-6.
- 24. Rajasekaran S. Natural history of Pott's kyphosis. Eur Spine J. 2013 Jun; 22 Suppl 4:634-40.
- 25. Rajasekaran S, Khandelwal G. Drug therapy in spinal tuberculosis. Eur Spine J. 2013 Jun;22 Suppl 4:587-93.
- 26. Felländer-Tsai L, Chan KM, Holen K, Walter W, Sculco TP, Rajasekaran S, Darwish MH, Kornah BA, Rolf CG, Puhl W, Yuan H, Hedin H. Future orthopedic training, a global watch. Acta Orthop. 2013 Aug;84(4):329-30.
- 27. Srikanth KP, Sundararajan SR, Rajasekaran V.Case Report: Late recovery in cerebral fat embolism. IJO, January 2014, Vol.48, Issue 1, pg 100-103.
- 28. Dhanasekara Raja. Total hip replacement in active tuberculosis"-Tamil Nadu Orthopaedic Association Journal, Vol 43
- 29. Sundararajan. S. Role of tranexamic acid in reducing the blood loss in TKR"-Tamil Nadu Orthopaedic Association Journal, Vol 43.

## **Publications**









## **Chapter Publications**

- 1. S Rajasekaran, Rishi Mugesh Kanna, Ajoy Prasad Shetty. Thoracolumbar Sacral Fractures. Texbook on Musculoskeletal Trauma in the Elderly.
- 2. S Rajasekaran, Rishi Mugesh Kanna, Ajoy Prasad Shetty. Pediatric Spinal infections. The Growing Spine - 2nd Edition. Accepted for Publication 2014.
- 3. S Rajasekaran, Devendra, Ramesh P, Dheenadhayalan J, Sundararajan S R, Initial Management of Open Fractures, Textbook on Fracture in Adults, Rockwood & Green's Fractures in Adults. Eight Edition. Vol.2, 2014 Published by Wolters Kluwever, Page No.353 to 396.
- 4. S Rajasekaran, S Raja Sabapathy, Devendra, Ramesh P, Dheenadhayalan J, Sundararajan S R, Chapter 29, Mangled Extremities. Textbook on Disaster Orthopaedics: Orthopedic Injuries in Natural Disaster and Mass Casualties Events.
- 5. Ajoy Prasad Shetty, Vishnu Prasad, Rishi M Kanna, S Rajasekaran, Cervical Corpectomy Tips and Tricks, Modern Techniques in Spine Surgery, Jaypee Publications 2014
- 6. S Rajasekaran, Rishi M Kanna, Ajoy P Shetty. Vascular Anatomy of the Endplates and Nutrient Supply of the Disc, Textbook on Basic Sciences of Spinal Diseases edited by Dr Alok D Sharan, Dr Simon Y Tang, Dr Alexander R Vaccaro 2013
- 7. S Rajasekaran, Rishi M Kanna, Ajoy P Shetty Cervical Spine Fractures and Dislocations. Vol 1: Upper Extremity and Spine. Contemporary Surgical Management of Fractures & Complications edited by Dr Asif Ilyas, Dr Saqib Rehman, 2013
- 8. S Rajasekaran, Rishi M Kanna, Ajoy P Shetty Thoracic and Lumbar Spine Fractures and Dislocations. Vol 1: Upper Extremity and Spine. Contemporary Surgical Management of Fractures & Complications edited by Dr Asif Ilyas, Sagib Rehman, 2013
- 9. S Rajasekaran, Rishi Mugesh Kanna, Ajoy Prasad Shetty. THE CERVICAL SPINE - Turek's Textbook of Orthopaedics, Under print.
- 40. S Rajasekaran, Rishi Mugesh Kanna, Ajoy Prasad Shetty. EVIDENCE BASED MEDICINE. AO Spine textbook on Research, Under print.











#### **32nd Annual Conference of KOACON (Kerala** Orthopaedic Association), Kerala January, 2013

#### Dr S Rajasekaran

- Current concepts in Thoracolumbar Fracture
- Problem of Deformity in Spinal Tuberculosis

#### Dr Dheenadhayalan

- Subtrochanteric fracture Nail Vs plate
- Late presentation of femoral neck fracture

Trauma Expert committee meeting, Mumbai, January, 2013

#### **Dr Dheenadhayalan**

Case Discussion

26th Annual Conference of ASSICON (Association of Spine Surgeons of India), Kerala, January, 2013

#### Dr S Rajasekaran

- Where does the Disc Fail in Lumbar Disc Herniation?
- Presidential Address: ASSI From Here to Where?"
- Is the Published Paper Sacred Anymore.

#### Dr Ajoy Prasad Shetty T

• Spino Pelvic Fixation – Indications & Technique

#### Dr Rishi Kanna

- Management of pain in spinal malignancies
- Patterns of disc degeneration are different in disc prolapse and DDD

#### **46th Annual Conference of TNOACON**

(Tamilnadu Orthopaedic Association), February, 2013

#### Dr S Rajasekaran

- Rationale of Surgical Management in TB of Spine
- Spine Session: (Video demonstration) How I Do it - Microdiscectomy

#### Dr Dheenadhayalan

- Approaches and Fixation Techniques for Complex Distal Femoral Fractures Including Intra-articular Fractures
- Good Outcome by An Innovative hybridization in difficult and complex distal shaft humerus fractures at junctional zone of shaft and columns of distal humerus



XXVI SICOT Triennial World Congress, SICOT-CBOT 2014

### **46th Annual Conference of TNOACON** (Tamilnadu Orthopaedic Association), February, 2013

#### **Dr Ajoy Prasad Shetty T**

- Radiology of the lumbar spine
- Posterior Single Stage Hemivertebra Excision with • Transpedicular Instrumentation

#### **Dr Devendra**

Single stage reconstruction of Bone gaps in long bones using Gamma irradiated Allografts

#### Dr Sundarajan S.R

- MPFL reconstruction in patellar instability using double bundle semitendinosis autograft- A prospective series of 17 cases. It won the Prof Ramanathan CONSULTANT GOLD MEDAL
- Posterolateral reconstruction My favourite technique, video presentation

#### **Dr Ramesh**

Role of biochemical markers in open lower limb injuries

#### Dr Rishi Kanna

· Benign vertebral tumors of the spine (Prof Vyageswaralu Medal Presentation)

#### Dr Venkatdas

 Does elastic nailing for paediatric forearm fractures make a difference? (Prof M Natarajan Gold Medal)

#### 2nd Annual Sho Elbow Con, Pune, February 2013

#### Dr Dheenadhavalan

• Manipulation under anaesthesia in frozen shoulder

#### IASM, Ganga Hospital, Coimbatore March 2013,

#### Dr. S. R. Sundararajan

• PCL reconstruction Tips and tricks

#### **Guangdong Spine Symposium, China,** March, 2013

#### Dr Ajoy Prasad Shetty T

• Minimally invasive techniques in lumbar spine surgery

Dr S Rajasekaran with Dr Jens Chapman and Prof Christopher Josten, German Spine Meeting 2014, Germany

**National Symposium on Recent Trends in Innovative Research at Undergraduation: Science** & Society, Sri Venkateswara College, Dhaula Kuan, New Delhi, March 2013

#### Dr S Rajasekaran

• "Spinal Cord Injury and Regeneration"

#### **American Academy of Orthopaedic Surgeons** meeting, Chicago, USA, March 2013

#### Dr. Rishi Kanna

- Diffusion tensor imaging analysis and data metrics of normal human cervical spinal cord
- Quantification of neuronal injury in cervical myelopathy using diffusion tensor imaging (DTI)

#### Sunrise Shoulder CME, Cochin, April, 2013

#### Dr. S. R. Sundararajan

- Clinical and pathological aspects of Anterior shoulder instability
- Video presentation of subacromial decompression and Acromioclavicular joint excision.

#### ISOC Meeting, Klinik, Hamburg, April 2013

#### Dr S Rajasekaran

- Evolution and Treatment of Severe Kyphotic Deformity in Spinal Tuberculosis
- Ganga Hospital Open Injury Score to Predict Amputation and Limb Salvage Pathways in Severely Injured Limbs

#### ISHKS annual meeting, Kolkata, April 2013

#### Dr. Raikumar .N

• Screw augmentation in medial tibial bone defects during Total Knee Replacement

#### Ganga Operative Spine Course, Coimbatore, **April**, 2013

#### Dr S Rajasekaran

SRS Meeting, Alaska, USA, 2014

- Live Surgery presentation: Odontoid screw fixation
- Live Surgery presentation: L5 S1 Microdiscectomy
- Live Surgery presentation: Post TB Kyphosis Plan -Closing Opening Wedge Osteotomy



- Post Traumatic Kyphosis
- Live Demonstation • TB spine - circumferential decompression, reconstruction & fusion by all posterior approach
- Trans pedicular biopsy

#### AIOSKCON, Madurai, May, 2013.

#### Dr. S. R. Sundararajan

- Patella instability and MPFL reconstruction
- Role of Arthroscopy in subacromial decompression
- Posterolateral corner injuries and reconstruction

#### 40th Annual Meeting of ISSLS 2013, Scottsdale, Arizona, USA, May 2013

#### Dr S Rajasekaran

- Comparison of lumbar disc degeneration characteristics between patients with low back pain and sciatica results of clinico-radiological analysis of 224 patients
- The anatomy of failure in lumbar disc herniation an in-vivo, multi-modal, prospective study of 181 subjects

#### Kovai Medical Centre & Hospital,

#### **ARTHROPLASTY MEET Coimbatore, May 2014**

#### Dr. Dhanasekara Raja

"Unmet clinical needs"

#### Sunshine Shoulder Course, Hyderabad, May ,2013

#### Dr Dheenadhayalan

- Proximal humerus fractures
- Fracture clavicle when to fix and how to fix
- Chronic dislocations both anterior and posterior
- Total shoulder replacement
- Shoulder girdle injuries

#### AO principles course, Cochin, May,2013

#### Dr Dheenadhayalan

- Principles of fracture management the patient & the injury
- Humeral Shaft fractures
- Principles of Tension Band, Olecranon & Patellar Fractures



Dr Rajasekaran with facutly members during ISSLS, Korea

#### CME at Thrissur under the aegis of KOA, May, 2013

#### Dr Dheenadhayalan

• Non operative and minimal invasive surgery in management of fracture calcaneum

Stanley CME under the aegis of TNOA Chennai, June, 2013

#### **Dr Dheenadhayalan**

• Proximal humerus fracture video demonstration

**Combined meeting of the 10th Biannual Congress of the African Society of Orthopaedics** (SAFO) and the7th Annual Scientific Conference of the Kenya Orthopaedic Association (KOA), Kenya International Conference Centre (KICC), Nairobi Kenya, July 2013

#### Dr S Rajasekaran

- (Plenary Lecture): Problem of kyphosis in Spinal Tuberculosis
- Ganga Hospital Score in Management of Open Injuries
- The challenges of being a recipient of Medical Tourists
- Congenital Scoliosis
- DTI A new form of MRI

#### Ganga Operative Trauma Course, June, 2013

#### Dr Ajoy Prasad Shetty T

• Tips and tricks of iliosacral screw fixation

#### IPOS, Orlando, USA, June, 2013

#### Dr. Venkatadass K.

• Sliding-angulation osteotomy of ulna for chronic radial head dislocation following missed Monteggia Injuries – An innovative technique

#### SPARSH Trauma Course 2013, SPARSH

#### Hospital, Bangalore, July 2013

#### **Dr Devendra**

- Considerations in Skeletal fixation in Open fractures:
- The Problem of Bone gap

#### **Dr Ramesh Perumal**

- Biochemical markers in open lower limb injuries based on GHOIS.
- Role of VAC therapy in open injuries.



Dr Rajasekaran with the faculty members of Japanese Spine Surgery meeting in Hokkaido, 2014

### SPARSH Trauma Course 2013, SPARSH Hospital, Bangalore, July 2013

#### Dr S Rajasekaran

- Life Saving Measures First: Limb Next
- Resuscitating the Art of True Living
- Case Scenario Presentations
- Case Scenario-Casualties in Casualty-Can we avoid?
- Should you Score or is it a Bore? Problems of Failures & Secondary Amputation
- The Ganga Hospital Score
- Debridement Foundation for Success •
- VAC The Ultimate Help?

#### Prof. TKS CME, Maduranthagam, July 2013

#### Dr Dheenadhayalan

• Nonunion – Femoral neck fractures

#### **Continuing Medical Education, Thrissur,** July, 2013

#### Dr Balavenkat

• Guest Lecture on Geriatric Patients with hip surgeries: Anaesthetic challenges

#### AO Trauma MIO course, Ahmedabad, July, 2013 Dr Dheenadhayalan

• Complications in minimal invasive osteosynthesis

### APOA 2013- 9th Asia Pacific Spine Society **Congress with the 9th APOA Paediatric Section Congress and 5th APOA Infection Section** Scientific Meeting, Kuching, Sarawak, Malaysia, August 2013.

#### Dr S Rajasekaran

- New Technologies in Spine, What & When to Embrace?
- Involvement in Spine Societies
- Tips on Writing an Award Winning Manuscript

### 12th Annual Conference of OASIS and Pre **Conference CME and Workshop, Anandha Inn Convention Centre, Pondicherry, August, 2013**

#### Dr S Rajasekaran

- Prof Marthandam Memorial Oration: Management of Severe Spinal Deformities
- How to make your Research Project into an award winning one



### ICS (Instructional Course in Spine) 2013, Hotel Carlton, Kodaikanal, August 2013

#### Prof. S. Rajasekaran

- Surgical Planning in redo lumbar spinal surgery
- Biomechanics of a Kyphotic Spinal Deformity

#### **Dr Ajoy Prasad Shetty T**

· Planning instrumentation in the osteoporotic spine-Techniques to avoid implant failure

#### OASISCON, Pondicherry, August, 2013

#### Dr Ajoy Prasad Shetty T

• Decision making in thoracolumbar fractures

## MS Ramiah advanced learning center, Bangalore

#### August, 2013

#### **Dr Ajoy Prasad Shetty T**

- Cadaveric demonstration of lumbar pedicle screws & lumbar microdiscectomy
- Cadaveric workshop on Lumbar Micro Discectomy, Conventional Discectomy & Lumbar Pedical Screw Instrumentation"

#### Traumacon, Mumbai, August 2013

#### Dr Dheenadhayalan

- Infective nonunion of humerus
- Floating knee injuries
- Nonunion of trochanter
- Radial nerve suturing

#### **OASISCON, Pondicherry, August 2013**

#### Dr Dheenadhavalan

• Fixation of Radial head fractures

#### Hip symposium Vasanthi Orthopaedic Hospital, August,2013

#### **Dr. Dheenadhayalan**

• Unstable trochanteric fractures

### Shoulder symposium at Vasanthi Orthopaedic Hospital, August, 2013

#### **Dr. Dheenadhyalan**

• Floating shoulder injuries

### AO Basic principles course, Coimbatore, August, 2013

#### Dr. S. R. Sundararajan

- Surgical reduction techniques-Direct and Indirect
- Management of infections in fractures Acute and Chronic
- Extramedullary fixations-Bridging plate and external fixator

#### **Dr Devendra**

- Principles of management of Articular fractures
- Trochanteric fractures, management,

#### Dr Rajkumar

Presentation on Absolute Stability

#### **Dr Ramesh**

- Reduction techniques of diaphyseal fractures-principles and methods
- Distal femoral fractures-management principles.
- Emergency management of pelvic fractures—a critical skill can save lives

#### Dr Arun Kamal

- Tibia condyle fractures
- Locking plate principles

#### South Zone Conference of Indian Society of

#### Anaesthesiologists, SZISACON Pondicherry

#### August, 2013

#### Dr. Balavenkat

• Current Concepts in Blood Transfusion and Transfusion Trigger

#### AO principles course Chennai, August, 2013

#### Dr Dheenadhayalan

- Management of Open fracture
- Humerus fractures •
- Distal femur fractures

#### 3rd Indo US shoulder course, Coimbatore,

#### August, 2013

#### Dr Dheenadhayalan

Proximal humerus fractures





#### Dr Ajoy Prasad Shetty

#### Society, 48th Annual Meeting & Course, Lyon, France, September 2013

#### Dr S Rajasekaran

• A Global Perspective of the Management of Severe Spinal Deformities with Paralysis in Spinal Tuberculosis

#### Moderated the session on:

· Health Resources, Complications, Neuromuscular Scoliosis and Neuromonitoring

#### Spine Sciences' State of the Art Forum, (organized by Eurospine Foundation), Centre du Théâtre de l'Espérance (rue de la Chapelle 8, Geneva), Switzerland, september2013

#### Dr S Rajasekaran

- Pharmacological enhancement of disc diffusion and differentiation of healthy, ageing and degenerated disc
- Anatomy of Failure in Lumbar Disc Herniations

#### **AO Spine Operative Course For Spine Degenerative Disorders, Ganga Hospital Coimbatore, September 2013**

#### **Dr Ajoy Prasad Shetty T**

- Positioning for lumbar spine surgery
- Tips and tricks of Anterior cervical exposure
- · Live demonstration of 1) lumbar spinous splitting decompression
- lumbar microdiscectomy

#### **CME** - tumour awareness programme, Guest lecture at GKNM, Coimbatore. September, 2013

#### Dr Ajoy Prasad Shetty T

· Management of skeletal complications in multiple myeloma

#### **SPOT Hospital annual CME on Spinal** disorders, September 2013

#### **Dr Ajoy Prasad Shetty T**

- Whats new in spinal tuberculosis
- Live demonstration of spondylolisthesis surgery instrumented TLIF.





#### Karnataka State Conference KISACON2103, **Bangalore, September, 2013**

#### **Dr. Balavenkat**

• Anaesthesia for Geriatric patients coming for emergency orthopaedic procedure

#### **Combined Meeting of Neurospine & Midwest Orthopaedic Society, Salem, September, 2013**

#### Dr Ajoy Prasad Shetty T

- CME on Lumbar Degenerative Disc Disorders
- Imaging in Lumbar Disc Disorder
- Conservative Treatment of Lumbar Disc.

#### SICOT Orthopaedic 34th World Congress, Hyderabad, October 2013

#### Dr S Rajasekaran

- Future Imaging Techniques DTI, Spectroscopy, FMRI
- Steroids for Cervical Spinal Cord Injury Useful or Harmful?
- Spine Research Project "The Anatomy of failure in Lumbar Disc Herniation. An in-vivo, multi-modal, prospective study of 181 subjects"
- Limb Salvage Vs Amputation Do Scoring Systems Work?
- Plenary Lecture "Medicine For Whose Benefit? Let's Heal Ourselves First"

#### Dr. Devendra

- One bone forearm Reconstruction in challenging situations, a Simple solution
- Single stage reconstruction of Bone gaps in long bones using Gamma irradiated Allografts

#### **Dr. Anupama**

• How to read MRI SPINE

#### **Instructional course on Research** methodology, Chennai, October, 2013

### **Dr Dheenadhayalan**

• PUBLISHING A RESEARCH PAPER – WHAT THE JOURNALS WANT ?





Dr. J. Dheenadhavalan

World Society for Endoscopic, Navigated & **Minimal Invasive Spine Surgery, 6th Annual** Congress of the (WENMISS), New Delhi, November 2013

#### Dr S Rajasekaran

- Anatomy of Failure in Lumbar Disc Herniation
- Role of Navigation in Cervical Spine Surgery

#### CME on complex trauma Madurai. November, 2013

#### **Dr. Dheenadhyalan**

- Proximal humerus fractures fixation
- AC joint dislocation

#### Indian Arthroplasty Association Annual Meet, Jaipur, November, 2013.

#### Dr. Dhanasekara Raja

 Most difficult case management- Hip replacement, "Infection complicating metal on metal THR with metal hypersensitivity".

#### 13th ISSICON - 12th ASCON 2013 Conference in **Coimbatore, November 2013**

#### Dr S Rajasekaran

- Management of vertebral lesions in spinal cord injured patients
- Decompression techniques in thoracolumbar fractures
- SI joint fixation
- Paediatric spine injuries

#### **MOACON Nanded November. 2013**

#### Dr Dheenadhavalan

 Osteosynthesis in delayed presentation of femoral neck fractures

#### **International Spinal Cord Injury Conference**, **Coimbatore, November 2013**

#### Dr. Rishi Kanna

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- How I do it techniques Reduction of unibifacetal dislocation
- How I do it techniques Reducing translational injuries
- Osteoporotic fractures
- Load Sharing Classification in TL fractures

#### **AO Deformity course November, 2013**

#### Dr Ajoy Prasad Shetty

- Correction maneuvers in scoliosis
- Anterior release in scoliosis
- Principles in kyphosis correction •
- Surgery in ankylosing spondylitis •
- Deformity in infections

#### AOSpine Davos Course 2013, Davos, Switzerland, December, 2013

#### Dr S Rajasekaran

- Anatomy of Failure in Lumbar Disc Herniation
- Case presentation & Discussion-Adolescent Idiopathic Scolisis
- Expert opinion and lecture Adolescent Idiopathic Scoliosis (Lenke 1C- fuse both curves?)
- Case presentation & Discussion- Thoracolumbar Trauma in the elderly patient
- CPD Session: Theoretical part: New AOSpine cervical fracture classification
- Image for cervical trauma

#### 58th Annual Conference of IOACON 2013 (Indian **Orthopaedic Association Conference)** Agra, December, 2013

#### Dr S Rajasekaran

- KT Dholakia CME, Degenerative Disc Disease
- Kini Memorial Oration: Snakes and Ladders in the path to Professional Excellence
- Decision making in thoraco-lumbar burst fractures

#### **Dr Dheenadhyalan**

- · Decision making in open fracture management
- Radiological correlation of clinical outcome in proximal humerus fracture management

#### **Dr Devendra**

• Single stage reconstruction of Bone gaps in long bones using Gamma irradiated Allografts

#### Dr Rajkumar

- Evaluation of Radiological and functional outcome of Allografts in Orthopaedic procedures
- DIAPHRAGMATIC RUPTURE-A Phenomenon not to be missed
- Poster presentation on Screw augmentation in medial tibial bone defects during Total Knee Replacement.





Dr S Rajasekaran

### 58th Annual Conference of IOACON 2013 (Indian **Orthopaedic Association Conference)** Agra, December, 2013

#### Dr. Sundarrajan

- Is Single stage reconstruction possible with autografts alone in multiligamentous chronic knee injuries? A prospective case series of 40 patientsposter presentation,
- Patellar instability Arthroscopy assisted double bundled MPFL reconstruction using looped semitendinosus autograft. A prospective study of 25 cases.

#### Dr. Ramesh

- · Biochemical markers (serum lactate and Interleukin-6) in open injuries.
- Can they predict timing of reconstruction'

#### Dr. Rishi Kanna

• Genetic susceptibility of degenerative disc disease in the young (RC RALLAN BASIC SCIENCE PRESENTATION)

#### **Dr. Venkatdass**

• Is prone position ideal for manipulation & pinning of displaced pediatric extension type supracondylar fractures of humerus? - A randomized control trial.

#### **Dr. Vetrichelvan**

• Functional And Radiological Outcome Of Schatzker Type V & VI Tibial Plateau Fractures Treated With Dual Plating Technique.

#### Dr Gowrishankar

· Is prone position ideal for manipulation & pinning of displaced pediatric extension type supracondylar fractures of humerus? - A randomized control trial.

#### WIROC, Mumbai, December, 2013

#### **Dr Dheenadhayalan**

- · What not to do in intraarticular fractures of distal end of humerus
- Misunderstanding Modern Implants; Problems with Locked plates, and Management





### **National Indian Society of Anaesthesiolgists** Conference, Guwahati, Assam December, 2013

#### **Dr. Balavenkat**

- Intricacies of Spinal Anaesthesia
- Failed Spinal Anaesthesia: Causes and Solutions
- Panel Discussion on Polytrauma
- Regional Anaesthesia and AntiCoagulation

#### **Orthopaedic Learning Academy Webinar**,

#### Mumbai, December, 2013

#### **Dr. Dheenadhyalan**

Webinar on management of open injuries

#### **Dr. Ramesh**

- Arrival to Operation theatre in Open fractures management.
- Negative pressure wound therapy management in Open fractures management.

#### **Dr. Devendra**

• Primary Closure in Open Fractures

#### Ao advance course, Davos December, 2013

#### Dr Ajoy Prasad Shetty T

- Recurrent disc prolapse my approach
- Case presentation & solution for axial back pain
- Case presentation & solution for axial neck pain
- Role of instrumentation in OPLL

### **CME on Locking Plates, Current Concepts and** Pitfalls, Thirunelveli, December, 2013

#### Dr Dheenadhayalan

• Proximal humerus fractures

### **KOACON 2014 Trivandrum, January 2014**

#### **Dr. Dheenadhyalan**

• Proximal humerus fracture

### GANGA BASIC TRAUMA COURSE 2014

#### Dr. Sundarrajan

• Soft TissueInjuryconsiderations in fractures





Dr. S. Raja Sabapathy

Dr. P. Dhanasekara Raja

27th Annual Conference of Association of Spine Surgeons of India (ASSICON 2014) Conference, Hyatt Regency, Kolkatta, January, 2014

#### Dr S Rajasekaran

- MMP 7, CALM 1 and Cox 2 genes influence genetic susceptibility of lumbar degenerative disc disease in young adults – Analysis of 58 single nucleotide polymorphism in 580 individuals based on Total Degenerative Disc Score.
- Childhood spinal tuberculosis A "Two in One Disease" Entity
- Video Presentation When to go Posterior in spinal TB

#### Dr Ajoy Prasad Shetty T

- Biopsy of spine tumors
- Subaxial cervical spine injury role of anterior & posterior surgery
- Hemi vertebrae excision in congenital scoliosis (Presentation for VTI medal)

#### Dr Rishi Kanna

- Posterior fixation including the fractured vertebra – results of fractures of LSC  ${>}7$ 

### 20th Annual Conference of Pediatric Orthopaedic Society of India (POSICON 2014) Conference, Le Royal Meridian, Chennai., January, 2014

#### Dr S Rajasekaran

• Tuberculous Kyphosis

#### Dr Venkatadass K

• Allografts – a boon in treating pediatric bone tumours

#### **IASMCON Jaipur, January 2014**

#### Dr. S. R. Sundararajan

- Mechanism of knee sports injuries types / Facts.
- Clinical Examination of the Shoulder
- Anatomical double bundle reconstruction in Elite Athlete

#### VOSCON - VIDHARBHA ORTHOPAEDIC SOCIETY Nagpur January, 2014

#### DR. Dheenadhyalan .J

- Reduce, hold and fix Distal femur fractures
- Posteromedial fragment of tibial plateau fractures
- Space rod technique in bone defects
- Allografts in distal femur fractures

#### RACE, Sri Ramachandra Medical College, Chennai, January 2014

#### Dr. Balavenkat

- Intraoperative Spinal Cord Monitoring"
- Monitoring Fluid Therapy: can all that counts be counted

#### 47th Annual Conference of Tamilnadu Orthopaedic Association (TNOACON 2014) Conference, Chettinad Health City, Kelambakkam, Chennai, February, 2014

#### Dr S Rajasekaran

- Limb Salvage Vs Amputation in Mangled Extremities
- Odontoid Fractures of Spine
- Prof M Natarajan Oration Medicine for Whose
  Benefit

#### KOACON (Karnataka Orthopaedic Association Conference) 2014, NIMHANS Convention Centre, Bangalore, February 2014

#### Dr S Rajasekaran

- Listhesis What to do and How to do?
- How I do it? Video Session on PLIF
- Scope for Research in Orthopaedics in Current Setting (Scenario)

#### Dr. Dheenadhyalan

- Proximal humerus fracture video demonstration
- Posteromedial fragment of tibial pleateu

#### TNOA CON Chennai, February, 2014.

#### Dr Dheenadhayalan

- Hoffas fracture
- Extraarticular floating knee injuries

#### Dr Dhanasekara Raja

• Fibular avulsion sign: A new radiological sign associated with peroneal nervepalsy complicating total knee replacement in valgus knees"







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Dr Ajoy Prasad Shetty



Dr. J. Dheenadhayalan

#### TNOA CON Chennai, February, 2014.

#### Dr. Sundarajan

- Tips and tricks in PCL Reconstruction Video session,
- Emerging trends-Isolated and combined PCL injuries
- Management of charcots joint in ankle and hind foot. Is it still a challenge?
- Video demonstration on Bankarts repair
- Poster presentation on neglected unreduced dislocation of MTP joint of great toe

#### Dr. Rajkumar

• SWASHBUCKLER APPROACH"- A Modified Anterior Approach for the Distal Femur Fractures

#### Dr. Rishi Kanna

• Genetic susceptibility of degenerative disc disease in the young

#### Dr. Venkatdass

• Is prone position ideal for closed reduction & pining of pediatric supracondylar fractures?

#### EBM Conference, Tata Memorial Hospital, Mumbai, February 2014

#### Dr. Balavenkat

• "Does Epidural Anaesthesia influence the morbidity and mortality?

33rd Annual Conference of North Zone chapter of Indian Orthopaedic Association, Hotel Radisson BLU Amritsar March 2014

#### Dr S Rajasekaran

- Plenary Lecture Medicine For Whose Benefit
- Spinal Trauma When to Fix ? How to Fix?
- Failed Back Surgery Syndrome

Asia Anaesthesia Summit, ITC Grand, Mumbai, March 2014

#### Dr. Balavenkat

• " Leadership in Anaesthesia"

#### Webinar IFAS 2014

#### Dr. Sundarajan

• Talus fractures





Dr. Venkatdass

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43rd Annual Meeting of the Japanese Society for Spine Surgery and Related Research, Kyoto, Japan April - 2014

#### Dr Ajoy Prasad Shetty T

• Hemivertebrectomy- indications & technique

Annual Meeting of the Spine Association of Gujarat, Hotel Inder Residency, Opp. Gujarat College, Ellisbridge, Ahmedabad, April 2014

#### Dr S Rajasekaran

- Dr. Dinubhai Patel Oration -'Spine Surgery For Whose Benefit'.
- Disc Diffusion

#### Symposium on Idiopathic Scoliosis – Lake Shore Hospital, Cochin, March 2014

#### Dr Ajoy Prasad Shetty T

- Bracing in scoliosis
- Proximal thoracic curve DIAGNOSIS AND MANAGEMENT

#### ISHKS annual meeting PUNE, April 2014

#### Dr. Rajkumar .N

 Acetabular Reconstruction Rings & Cages in Total hip replacement to reconstruct deficient acetabulum – A series of 44 cases

#### KMCH - Paediatric Orthopaedic Conference, KMCH Coimbatore, April 2014

#### Dr Ajoy Prasad Shetty T

• Scoliosis in children - spine at risk

#### World Forum for Spine Research, China, May 2014

#### Dr S Rajasekaran

- The Anatomy of Failure and importance of end plate injury in lumbar disc prolapse and degeneration
- MMP 7, CALM 1 and Cox 2 genes influence genetic susceptibility of lumbar degenerative disc disease in young adults - Analysis of 58 Single Nucleotide Polymorphisms in 580 individuals based on Total Degenerative Disc Score.

Dr. N. Rajkumar

Dr. Rishi Kanna

#### **AO Spine Principles Course – Xian, China, May 2014**

#### Dr S Rajasekaran

- Overview of congenital scoliosis, assessment of growth potential, and indications for surgery
- Assessment and Management of TB Spinal Infection Case Presentation: Chiari malformation and syrinx in a patient with scoliosis

#### The Childs Trust Medical Research Foundation(CTMRF) and XXIII Dr M S **Ramakrishnan Memorial Endowment Oration.** Chennai, May 2014

#### Dr S Rajasekaran

• Oration: Pediatric Spinal Problems

#### Kovai Medical Centre & Hospital, **ARTHROPLASTY MEET Coimbatore, May 2014**

#### Dr. Dhanasekara Raja

• " Unmet clinical needs"

#### CME of Midwest orthopaedic society, Salem-**May, 2014**

#### **Dr Ajoy Prasad Shetty T**

- Pyogenic Spodylodiscitis Diagnosis And Management
- Management Of Tharacolumbar Fractures By Posterior Approach
- Interbody Fusion In Spondylolisthesis.

#### Bone School, Sparsh Hospital, Bangalore, **May 2014**

#### **Dr Ajoy Prasad Shetty T**

- Evaluation & management of thoracolumbar fractures
- Evaluation of scoliosis patient

#### **ISSLS**, 41st Annual Meeting (International Society for the Study of Lumbar Spine) Korea, **June 2014**

#### Dr S Rajasekaran

- Accelerated DDD in young adults is associated with polymorphisms in MMP 7, CALM 1 and Cox 2 genes
- A Prospective study of Correlation between clinical disability and radiological features in degenerative lumbar canal stenosis (LCS)

#### **Ganga Operative Trauma Course, June 2014**

#### Dr S Rajasekaran

Decision making in open fractures

#### Dr Ajoy Prasad Shetty T

• Tips and tricks of iliosacral screw fixation

#### Ganga Operative Trauma course, Coimbatore,

#### June 2014.

#### Dr. Dheenadhyalan

- Live surgical demonstration of distal radius fracture fixation
- Live surgical demonstration of proximal humerus racture fixation
- Live surgical demonstration of tibial plataeu fracture

#### Dr P Dhanasekara Raja

• Live surgical demonstration of Trochanteric fracture with subtrochanteric extension

#### Dr. Rajkumar

• Live surgical demonstration of distal femur fracture fixation

#### Dr. Ramesh

• Role of Biochemical Markers in Open Fractures

#### Dr J Dheenadhayalan

• Management of Bone loss in Open Supracondylar Femur Fractures

#### Dr. Devendra

• Interlock Nailing Tips in Routine Practice

#### **Dr S Rajasekaran**

• Decision Making in Open Fractures

#### Dr S R Sundararajan

- Percutaneous Elevation of Tibial Plateau Fractures, Tips and Tricks
- Calcaneum Fractures Plating

#### **Dr Ajoy Shetty**

• SI Joint Fixation, Tips and Tricks

#### Hokkaido University Seminar on Surgery of Spine and Spinal Cord, Sapparo, Japan, July 2014

#### Dr S Rajasekaran

- The rationale for using metallic implants for spinal infections
- Surgical Strategy and procedures for severe kyphotic deformity in TB Spine
- Ilio-sacral fixation techniques

#### Dr MJ Joshi- IMA Bushan Puraskar Ceremony, **CME on Pain Management, Pune, July 2014**

#### Dr S Rajasekaran

- Low Back Pain: Facts and Myths
- Oration: Medicine for Whose Benefit

#### CME Madurai, July 2014

#### Dr Ajoy Prasad Shetty T

- Posterior surgery for scoliosis
- Cervicothoracic Injuries

#### Trauma Conclave, Chennai, July 2014,

#### Dr Venkatadass K

- Acute Lateral condyle fractures in children
- Radial Neck fractures in children
- Interactive Case discussion Lower limbs

#### Trauma Conclave Bangalore, July 2014

#### Dr. Venkatdass k

- Radial Neck Fractures in children
- Ankle Fractures in children

#### Instructional Course in Spine (ICS) 2014, Udiapur, August 2014

#### Dr S Rajasekaran

Does spondylotic myelopathy always need surgery

**Prof T K Shanmugasundaram Endowment Oration, Chennai, August 2014** 

#### Dr S Rajasekaran

• Oration: Surgeon and Spinal Tuberculosis





Dr Ajoy Prasad Shetty

Dr Balavenkat

### DMH - IORAS Golden Celebration, Uthankudi, Madurai, August 2014

#### Dr S Rajasekaran

• Controversies in Management of Spinal Fractures

#### IAPA 11th annual scientific conference, **Coimbatore August 2014**

#### Ms Gomathi

• Analysis of CTEV treated by ponseti's technique, won the Silver Medal for Best Oral Paper Presentation

#### **IFICS (International Fracture in Children** Symposium), Pune, India, August, 2014

#### Dr Venkatadass K.

- Complications of Fracture Neck Femur in Children,
- Management of Pink Pulse less Hand with Supracondylar Fractures

#### Traumacon, Mumbai, August 2014

#### Dr. Dheenadhvalan

- Open fracture lower end of tibia
- Distal radius fixation—circumstances where the plan change
- Tourniquet
- Surgical anatomy of nerves in upper limb

#### **CTLS Workshop 2014, Ganga Hospital, Coimbatore, August 2014**

#### **Dr. Balavenkat**

Course Faculty and coordinator

#### ICS Udaipur, August, 2014

#### Dr Ajoy Prasad Shetty T

• Infection or spinal tumours- Radiological dilemma

#### **AO Trauma Surgical Webcast, Basel** Switzerland. September 2014

#### **Dr. Dheenadhyalan**

• Intramedullary nailing of open fracture Tibia





Dr. Rishi Kanna

# Scoliosis Research Society, 49th Annual Meeting, USA, September 2014

#### Dr S Rajasekaran

- Posterior-Only Approach to High Grade Spondylolisthesis
- Growth Modulation Changes in Childhood Post-Tubercular Kyphosis: Long-Term Prospective Multicenter Study Over 10 Years

#### CME on "MANAGEMENT OF COMPLEX FRACTURES – AN UPDATE", SPOT hospital Chennai September 2014

#### Dr. Dheenadhyalan

- Side swipe injury
- Open injuries of distal tibia
- Live surgical demonstration of LCP for distal tibia fracture

# AORA National Conference, LeMeridian, New Delhi, September 2014

#### Dr. Balavenkat

- Clinical Pathways for pain relief in shoulder arthroplasty
- Clinical Pathways for Pain relief in patients for Total Knee Arthroplasty
- Teaching and Education in regional Anaesthesia
- Video Demonstration of Interscalene Block

#### AO introduction program Coimbatore, September, 2014

#### Dr Dheenadhayalan

- AO foundation then and now
- Management of open fractures
- Infective non unions

#### Singapore Orthopaedic Association, 27th Annual Scientific Meeting, Singapore, October, 2014

### Dr S Rajasekaran

- Advances in Spine Surgery For Whose Benefit
- Lessons from an Osteoporotic Fracture
- Evidence based vs Patient based Medicine

#### 8th Biennial Conference of Orthopaedic Association of SAARC Countries, Agra, October 2014

#### Dr S Rajasekaran

- Plenary lecture: David & Goliath The SAARC Versus Advanced Countries
- Current Concepts in Spinal Tumors

#### 1st NATIONAL GREAT DEBATES OF ORTHOPAEDICS at Kovai Medical Centre & Hospital, Coimbatore, October 2014

#### Dr. Dhanasekara Raja

• " Role of CAOS in TKR" Affirmative

#### AOSpine Principles Seminar, Colombo, Srilanka October, 2014

#### Dr Ajoy Prasad Shetty T

- Imaging of cervical spine trauma
- Bifacetal dislocation with normal neurology
- Surgical principles and selection of procedures in thoracolumbar spine injuries. (Ant/Post/short/long
- Video Cervical Corpectomy
- Injection techniques in DDD
- Introduction to spino-pelvic parameters
- Faculty TB spine symposium

#### Mumbai Anaesthesia Society Annual Conference, Mumbai, October 2014

#### Dr. Balavenkat

- Common mistakes inside the operating room, Private Practitioners forum,
- "Anaesthesia for major spine surgery"
- Multimodal Analgesia in Total Knee Arthroplasty
- Invited Lecture on DVT: An enigma,

#### World Congress of Regional Anaesthesia and Pain therapy, Cape Town, South Africa, November, 2014

#### Dr Balavenkat

- Guest Lecture on Failed Spinal Anaesthesia
- Role of Regional Anaesthesia in Trauma
- Workshop: Upper Extremity Block with USG



Dr. N. Rajkumar



Dr Gowri Shankar



Dr. C. Arun Kamal

Coimbatore Orthopaedic Society Meeting, Coimbatore, November, 2014.

#### Dr. Dhanasekara Raja

• " Biomechanics and evolution of total hip replacement"

#### **MOACON, Akola November 2014**

#### Dr. Dheenadhyalan

- Side swipe injury
- Distal radius fracture current trend
- Valgus osteotomy for femoral neck fracture nonunion
- Forearm nonunion

#### Ganga Paediatric Hip course Coimbatore , December, 2014

#### Dr .Dheenadhyalan

• Biomechanics of Hip

#### Dr. Dhanasekara Raja

• Surface replacement in hip- What is good, what is bad and what is the current status

#### **Dr. Venkatdass**

• SCFE – the Ganga Experience

#### Dr S Rajasekaran

• THR in young patients

# Indian Society of Anaesthesiologists, Madurai, December, 2014

#### Dr. Balavenkat

- Dr Venkat Rao Oration: " Leadership in Anaesthesia: Challenges and Solutions.
- Ultrasound Guided Regional Anaesthesia

# Chennai course on thoracic instrumentation & cadaver workshop - chennai, December, 2014

#### Dr Ajoy Prasad Shetty T

- Thoracic pedicle screws
- Cadaver workshop on thoracic pedicle instrumentation





Dr. S.R. Sundararajan

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## Presentations

#### ISKSAA 2014, Delhi

#### Dr S R Sundararajan

- BPTB ACLR : Does it still have a role ?
- Arthroscopic Bankart repair-video techniques

#### Arthroscopic Grading of Articular cartilage IAS 2014 Hyderabad

#### Dr S R Sundararajan

- Single bundle vs Double bundle reconstruction ACL
- Posterolateral reconstruction,

#### **IOACON 2014 Hyderabad**

- Subacromial decompression
- Anatomical ACL Reconstruction
- Live surgery Demonstration PCL Reconstruction
- Management of charcots in ankle and Hindfoot presented in Dolakia Gold medal session.

#### International Foot and Ankle Course 2014 Chennai

#### Dr S R Sundararajan

- Management of open Foot and Ankle fractures
- Paediatric Ankle Fractures

#### Indian Foot and Ankle Society Meeting, Pune 2014

#### Dr S R Sundararajan

- TibialPilon Fracture
- Infection of Foot and Ankle

#### Shouldercon, Cochin, Feb 2014

#### Dr S R Sundararajan

• Proximal Humerus fractures

#### 2nd Isakos Knee Course, Chennai 2014

#### Dr S R Sundararajan

• Acute and chronie tears of Quadriceps and patellar tendon tears

#### Pune Knee Course 2014

#### Dr S R Sundararajan

• Acute posterolateral corner repair



Dr S Raja Sabapathy



Dr. Anupama N.V

## Distinguished Visiting Professors

The institution invites visiting professors every year which is of great benefit to the entire team. Pioneers in various specialties are invited to deliver lectures, conduct ward rounds and to perform surgeries in their areas of specialization. This gives a wonderful opportunity for all the staff members of the team from the trainee to the senior consultant to update themselves and learn the tips and tricks.



Prof. Marc F Swiontkowski USA Visiting Professor 2008

Marc F Swiontkowski, Professor, Department of Orthopaedics, University of Minnesota, USA was the distinguished Visiting Professor for the year 2008.



**Prof. Jegan Krishnan** Australia Visiting Professor 2009

Prof Jegan Krishnan, Chair in Orthopaedic Surgery, Flinders University, Adelaide, Australia was a distinguished Visiting Professor for the year 2009.



**Prof. K. Daniel Riew** 

USA

Visiting Professor 2012

Prof K Daniel Riew, Mildred B.

Simon Distinguished Professor

of Orthopedic Surgery. Chief of

Cervical Spine Surgery,

Washington University School of

Medicine was the distinguished

Visiting Professor for 2012.



**Dr Steve Glassman** USA Visiting Professor 2013

Prof Steve Glassmann, Prof of Orthopaedic Surgery, University of Louisville, USA was the distinguished Visiting Professor for the year 2013.

**Dr Jeffrey O. Anglen** USA

Visiting Professor 2014

Prof Jeffrey O Anglen, Prof, Dep of Orthopaedic Surgery, Indiana University School of Medicine, Indianapolis, USA was the distinguished Visiting Professor for the year 2014

## Visiting Professors



Dr Oheneba Boachie USA Visiting Professor 2010

Dr Boachie, Professor of Ortho paedic Surgery, Weill Cornell Medical College and Chief of the Scoliosis Service, Hospital for Special Surgery was the disting uished Visiting Professor for the year 2010.



**Dr Harish S Hosalkar** USA Visiting Professor 2014

Dr Harish Hosalkar, Diplomate, American Board of Orthopedic Surgery, Director, Center for Hip Preservation and Children's Orthopedics, California, USA was a distinguished Visiting Professor for the year 2014

## International Visitors



Dr. Gao Xinghua, China (Fellowship in Arthroplasty) I learnt many joint replacement Surgical techniques and many tips. Excellent hospital, excellent team



Dr. Kabir Abubakar, Nigeria. (Microsurgery Training Course) The course went excellently Well; beyond the wet lab, i had the Opportunity of assisting in surgeries With the "state of the art open Vario microscope".



Dr. Satoru Demura, Japan (JSSR Fellow 2013) I could learn a lot of things from you in A week. I really appreciate all of your

Kindness and hospitality.



Dr. Go Yoshida, Japan (JSSR Fellow 2013) I am very impressed not only by your Medical technology and surgical Technique but also your philosophy For the patients.



Dr. Lai Kah Weng, Singapore. (APOA Hip Travelling Fellow) A great facility with really good surgeons, especially after knowing how busy a schedule you keep.



Dr. Caroline Blakey, (British Orthopaedic Association -Passage to India fellowship) A wonderful experience, fantastic opportunity for me to see how the set up works and the facility.



Dr. Derek Park, UK.

(British Orthopaedic Association -Passage to India fellowship) Once in a few generations, a few gifted men rise to prominence and inspire many others with their dedication, vision and integrity



Dr. Levi Morse, Australia. Ganga hospital is truly an inspirational place. World class surgical care by an amazing team of professionals.



Dr. Ed Simor Khan, Malaysia (APSS Traveling Fellows) "Very good learning experience, very kind hospitality."



Dr. Dae Hyun Park, Korea (APSS Traveling Fellows) Nice learning experience. Great work.



Dr. Hyun - Kee Yang, Korea (APSS Traveling Fellows) Such a great experience.



Dr Neil Mackay, Australia (Orthopedic Trainee) All your work is simply outstanding



Dr. Robbie Ray, Scotland, U.K.

(IOA/ BOTA Travelling Orthopaedic Fellow) I have had a truly wonderful experience and have learned a huge amount during my short stay at this world class institute.



Dr. Masafumil Kashii, Japan (JSSR Fellow 2014) It is a wonderful and priceless experience in Ganga Hospital, India



Dr. Akio Iwanami, Japan (JSSR Fellow 2014) I really appreciate you giving us this golden chance !



Dr Manjula Bansal, New York Superb institution. Great work. Surprised to see such high quality work. Thank you Dr S Rajasekaran



Dr. Md. Shahidul Islam Akon, Bangaladesh. It's a great place, I learnt a lot from this hospital,



Dr. Oluwatoba Taiwo Akinniyi, Nigeria.

The little time I spent in this hospital allowed me to learn more than what I have in the last few years. This is truly a ' temple of learning'.

## International Visitors



Dr. Joe Baker, Ireland. (BOA/Zimmer Passage to India Travelling Fellow) I have learnt a great deal in my area of interest (spine) as well as seeing a variety of complex trauma.



Dr. Gayle Silveira, Australia. I was exposed to a good volume of complex trauma cases and picked up some valuable tips from the efficient trauma surgeons.



Dr Alok Sharan, USA "Very good learning experience, Thank you for an excellent visit"



Dr. Hatem Hamdy, Egypt. This hospital is extremely wonderful. Actually I did not find any mistake in this hospital, all thing go smoothly and systematic



Dr. Lohnan Shedul, Nigeria. Great experience and learnt a lot beyond my expectations.



Ganga Spine Microsurgery Training Centre by Prof. Gunnar Andersson, USA

## Ganga Spine Microsurgery Course

To transfer the knowledge and experience of the unit, the spine department of Ganga Hospital in collaboration with Carl Zeiss started a unique microsurgical training centre equipped with a permanent wet lab utilizing the latest Zeiss operating microscopes and high quality surgical instruments, which will be first of its kind in the world.

The purpose of the course is to establish and strengthen the foundation of microsurgical skills in spine surgery. The course has two modules. In the clinical training module, the trainee spends two days in the operating theatre assisting and observing spinal microsurgeries along with other spinal instrumentation surgeries. In the lab module, the trainee is given hands-on training in the wet lab. The course is designed to benefit practising orthopaedic surgeons, spine surgeos and neurosurgeons by teaching them the nuances and techniques of basic microsurgical procedures like lumbar microdiscectomy, micro decompression, anterior cervical microdi scectomy, intra dural surgeries and repair of dural tears.

Trainees in the past four years..

Dr Abdul Halim Yusof, Malavsia Dr Abu Baker, Bangladesh Dr Ahmed Tajuddin, Abdullah, Malaysia Dr Ali Saadun Al Khaykany, Iraq Dr Anukul Kumar Deb Goswami, UK Dr Paul M. Atienza, Philippines Dr Ramachandran Arumugham, Malaysia

Dr Abdul Jaleel T K,Kerala Dr Ajay Krishnan, Surat Dr Akshay Jain, Indore Dr Antony Joseph Thoppil, Kerala Dr Arul Durai Arasu, Dindigul Dr Ashok D. Trivandrum Dr Ashok M Ghodke, Mumbai Dr B V R N Varma, Vizag Dr Bangari Swamy, Karimnagar Dr Bikram Kar, Cuttack, Orissa Dr Chandrappa M, Bangalore Dr Gautam Prasad, Mumbai Dr Gowrishankar Swamy LG, Bangalore Dr I Satish Raju, Vizag Dr Jay Deep Ghosh, Kolkatta Dr Jim F Vellara, Thrissur Dr K Sambasiva Rao, Tenali Dr K. Shanmugasundaram, Pollachi Dr Karthikeyan R, Coimbatore Dr M Naravana Reddy, Chennai Dr Madan Temker D, Bangalore Dr Mallikarjuna Reddy, Karnataka Dr Mathew P Daniel, Kerala Dr Muthurai, Nagercoil Dr N.Dheen Mohamed Ismail, Chennai Dr Natarajan S, Erode Dr Natesh J. Bangalore Dr P Gnanaprakash Coimbatore Dr P P Sunil, Thrissur

#### Dr Coen Jaspers, Netherlands Dr David Kilonzo, Kenva Dr Harjanto Effendi, Indonesia Dr Khoo Eng Hooi, Malaysia Dr Kishore Kumar M. Muscat Dr Lim Phaik Gan, Malaysia Dr Shree Kumar Dinesh, Singapore

INTERNATIONAL

### NATIONAL

Dr Pankaj G Gujar, Maharashtra Dr Pankai Kandwal, Mumbai Dr Rahul Singh, Saharanpur Dr Rajeev Naik, Bangalore Dr Baiendra U Mehta, Baikot Dr Baiesh Khanna G. Chennai Dr Raijv Shah, Vadodara Dr Ramanand Mishra, Gorakhpur Dr Rashid A S, Kerala Dr Ravi K. Kerala Dr Renjit Kumar J, Kerala Dr S Jagadeesh Babu, Hyderabad Dr Sachithanandam V, Erode Dr Saheel Maaiid, J & K Dr Sandeep Surana, Ahmednagar Dr Saurabh Chaudhary, Salem Dr Shameer Ali.T.P, Kerala Dr Shanmugasundaram P, Chennai Dr Sudheer U, Kerala Dr Sundararajan N D. Gopichettipalayam Dr Sunil Kumar H.Bangalore Dr Thiraviam T, Nagercoil Dr Tushar J Deore, Pune Dr V.Surva Prakash Rao, Hyderabad Dr Venugopal S, Bangalore Dr Veushj Sharma, Punjab Dr Vignesh Jayabalan S, Chennai

Dr Tushar Dholakia, Dubai Dr Akinnivi Oluwatoba Taiwo, Nigeria Dr Shedul Lohman, Nigeria Dr. Shahid Akon, Bangladesh Dr Hatem Handy, Egypt

Dr Vishal Prakash Thakur, Mumbai Dr Dangeti Ram Kishore, Rajahmundry Dr Shantanu Anil Guniotikar. Solapur Dr Prabhakaran Javaprakasan, Thrissur Dr Chetan V Mudaliar, Bilaspur Dr Hitesh L Kukadya, Surat Dr V Ravi, Chennai Dr C Ranganath, Bangalore Dr Saurabh Kapoor, Delhi Dr Palavali Maheswara Reddy Dr Deepu Sebastian, Kannur Dr A Venkateshwar Rao, Secunderabad Dr Ajay V Randive, Mumbai Dr Bharath Kumar B. Trichy Dr Ambarish Mathesul, Pune

> Dr Ajoy Shetty guiding trainees at the spine microsurgerv wet lab



There is a huge demand for bone graft at our hospital due to the enormous number of polytrauma and tumor patients who need complex reconstructive procedures. The Tissue Bank at the Department of Orthopaedics, Ganga Hospital was launched in 2008. Located within the hospital premises, it is a self-funded, non-profit tissue bank aimed at providing high class tissue banking services. It is only the third tissue bank in India to use Gamma irradiation as a method of sterilization. The bank follows International Atomic Energy Agency (IAEA) standards followed by other tissue banks in the world.

The bank is currently using well processed and gamma irradiated cortico cancellous bone allografts from tibial slices and femoral heads, long bones from amputated stumps in various clinical conditions like comminuted fractures and non-unions with bone loss of both upper & lower limbs, revision joint replacement surgeries, tumor and spinal fusion surgeries. The grafts are screened for HIV, HCV, HBV and syphilis to eliminate risk of disease transmission.

Dr. P. Dhanasekara Raja, Tissue Bank manager has received the Degree of Diploma in Tissue banking from National University of Singapore. Dr. Devendra is the Scientific Officer in charge of preparation, processing, storage and transportation of the allografts. He has received training in the Tata Memorial Bone Bank in Mumbai and has also undergone training in the National University, Singapore.

### **Total no of Allografts utilized** from 2008 to 2014

Allograft	No of Grafts Utilis
Femoral Heads	826
Tibial Slices Femur	583 10
Tibia	5
Fibula	16
Metatarsals	20
Calcaneum	2
Talus	2
Total	1488

## Ganga Hospital Tissue Bank





Dr. P. Dhanasekara Raja receiving the Diploma in Tissue Banking Certificate from Prof Aziz Nather. Director of Tissue Bank, National University of Singapore.



Dr.A Devendra receiving the Tissue Banking Certificate from Prof Aziz Nather Director of Tissue Bank, National University of Singapore.



This patient, who suffered a 13cm bone loss in a traumatic supracondylar fracture of the femur was treated successfully with Gamma irradiated Structural Allograft

Major Courses & Conferences 2013-2014

## Major Courses & Conferences

### **Ganga Operative Spine Course 2013** April 25-28, 2013

The Ganga Operative Spine Course was held from April 25 to April 28, 2013. The conference was well attended by about 350 national and international delegates. The highlight of the course was the 20 live surgical demonstrations. There were different modules for basic spine surgery, complex spine surgery and deformity corrections. The course content was well appreciated by all the delegates and was recognised by The Tamilnadu Dr MGR Medical University for CME credits..



## **National Faculty**

- Dr. Abhay Nene Dr. Ajoy P Shetty Dr. Arvind Jayaswal Dr. Bala Murali Dr. Prasanth Kekre
- Dr. S Rajasekaran Dr. Ram Chaddha Dr. Rishi Kanna Dr. Samir Dalvie Dr. Sajan Hegde
- Dr. Shekhar Y Bhojraj Dr. Shankar Acharya Dr. Saumyajit Basu

### **International Faculty**



Dr Daniel K Riew USA

Dr Munish Gupta

USA



Dr German Ochoa Amaya Colombia



Dr Manabu Ito Japan



Dr Neel Anand USA



Dr Norbert Passuti France



Dr Yong Hai China



## **Ganga Operative Arthroplasty Course 2013**

May 23rd to 26th, 2013

Ganga Operative Arthroplasty Course was held from May 23 to May 26, 2013. The conference was well attended by about 300 national and international delegates. The course had 20 live surgical demonstrations with different modules for basic arthroplasty, complex arthroplasty and revision arthroplasty.

### **National Faculty**

Dr.	Bharat Mody
Dr.	Sharan Patil
Dr.	S Rajasekaran
Dr.	Ashok Rajgopal
Dr.	Dhanasekara Raja
Dr.	Gurava Reddy

## **International Faculty**



Dr. Harish Bhende

Dr. Anoop Jhurani

Dr. Vijay Bose

Dr. N. S. Laud

Dr. Vernon Lee

Dr. S.K.S Marya



Dr. Chittaranjan S Ranawat USA

Dr. Jegan Krishnan Australia





Malaysia





# 2013-2014

Dr. Parag Sancheti Dr. P. Suryanarayan Dr. C.J. Thakkar Dr. Hemant Wakankar



Dr. Rhidian Morgan Jones UK





3"Genge Operative Arthropiasty Course 2013

## Major Courses & Conferences 2013-2014

**34th Indian Association of Sports Medicine Congress 2013** 15th to 17th March 2013

The 34th Indian Association of Sports Medicine Congress 2013 was held in Ganga Hospital from15th to 17th March 2013. The conference was well attended by about 200 national and international delegates. The highlight of the course was the three pre-conference courses - arthroscopy with live surgeries, team physician course and sports rehabilation course.

### **International Faculty**

Dr S Venkat, UK Dr Mohd Razi, Iran Dr R Moradi, Iran Dr Asela, Sri Lanka

- Dr C Thurairaia, Sri Lanka Dr H Suraweera, Sri Lanka
- **National Faculty**
- Dr Raghuveer Reddy, Hyderabad Dr Sanjay Desai, Mumbai Dr S R Sundararajan, Coimbatore Dr J Dheenadhayalan, Coimbatore Dr Dipankar Bhattacharya, Guwahati Dr E B S Ramanathan, India Dr S Rajasekaran, Coimbatore Dr Ali Irani, Mumbai Prof Mandeep Dhillon, Chandigarh

Prof Jaspal Sandhu, Amritsar Dr T Ajoy Prasad Shetty, Coimbatore Dr AK Joy Singh, Imphal Dr Alka Beotra, New Delhi Dr Farasath Hussain, Gaya Dr Gulshan Khanna, New Delhi Dr RC Mishra, Jharkhand Dr Shweta Shenoy, Amritsar Dr Vijay Shetty, Mumbai



Dr Anant Joshi, Mumbai

Dr Ashish Babulkar, Pune

Dr IPS Oberoi, New Delhi

Dr Parag Sancheti, Pune

Dr Arumugam, Chennai

Dr Palanivel Rajan, Madurai

Dr David V Rajan, Coimbatore

Dr Dinshaw Pardiwala, Mumbai

#### **Ganga Operative Pediatric Hip Course 2014** December 5 to 7, 2014

The first Ganga Operative Pediatric HIp Course was held from December 5th to 7th, 2014. The theme of the conference was "Hip Preservation". This was the first of its kind unique meeting focussing on a particular region. There was didactic lectures, debates, workshops and live surgeries. 12 different pediatric hip surgeries were demonstrated by eminent national and international faculty. The concept of hip preservation surgery was discussed in detail and the icing on the cake was debate on "management of SCFE' which is one of the current hot topic in controversy. The course was well appreciated by all the delegates.

#### **International Faculty**



Dr Harish Hosalkar San Diego, USA



Dr Kai Ziebarth Bern, Switzerland



Dr Prasad V Gourineni Chicago, USA

#### **National Faculty**

Prof K Sriram, Chennai Prof Vrisha Madhuri, Vellore Prof S Rajasekaran, Coimbatore Dr Sandeep Patwardhan, Pune Dr Taral Nagda, Mumbai Dr Jayanth Sampath, Bangalore Dr Hitesh Shah, Manipal Dr Dhanasekara Raja, Coimbatore Dr Venkatadass K, Coimbatore Dr J Dheenadhayalan, Coimbatore

## Major Courses & Conferences





The Ganga Operative Trauma Course was held from June 27 to June 29, 2014. The conference was well attended by about 400 national and international delegates. There were 25 live surgical demonstrations including complex trauma surgeries. the highlight of the course was the session on "interesting case discussions" which was well appreciated and was a good opportunity for interaction of the delegates with the expert panel.

### **National Faculty**

Dr Jayasankar P V Dr Sunil Kulkarni Dr Ramesh Kumar Sen Dr John Mukhopadhava Dr Rajasekaran S

#### **International Faculty**



Dr. Vikas M. Agashe

Dr. Chetan Pradhan

Dr Dheenadhavalan J

Dr Mandeep Dhillon

Dr Sushrut Babhulkar



Dr Jeffrey Anglen

Prof Dr med Karl Stoffel

Prof Dr Med Christoph Josten



# 2013-2014

Dr Sharath Rao Dr Siva Shankar Dr Ajith Shetty Dr Sundararaian S R Dr Dilip Tanna Dr Thakkar C J





Dr Diarmuid Murphy

> and Ganga Operative Trauma Course

## Corporate Social Responsibilities





Dr APJ Abdul Kalam , Former President of India , inaugurating the SWASAM ward

GANGA SPINE INJURY AND REHABILITATION CENTRE

(6) GANGA H

Pujyasree Swami Dayananda Saraswati

Dr. H.S. Chhabra

Pujyasri Dayananda Saraswati Swamiji lighting the lamp during the inauguration of Ganga Spine Injury Rehabilitation Centre

I I PIMINI

Ganga Spine Injury Rehabilitation Centre was inaugurated on 3rd Nov 2014 At Ganga Hospital, we believe that our ability to make a difference extends beyond our hospital walls. Both as an organization and as individuals, we have been sensitive to the obligations in the society and actively been a partner in many social service projects. Each day, we're discovering new ways to make an impact in the lives of others and we have realized just how rewarding it can be for us also. Several projects have flourished and continue to grow from strength to strength.

#### 8 Projects under 'SWASAM'

- Project Helpline Free deformity correction surgeries
- "Help for the Hands in Need" Project
- UYIR People's Movement against road accidents.
- Road Safety & First aid awareness programs for school children and college students
- Project 'Smile train'
- Ganga Hand Injury Support Group
- Educational activities under Ganga Orthopaedic Research & Education Foundation (GOREF)
- Rural Health programs.



"Visiting your hospital and seeing your Helpline project made me believe in God (for a person who is a non-believer). God resides - not in our imaginations, but in the good intentions of people like you". - Suhasini Maniratnam, Film Maker and Social Worker

## Chief Minister's Below Poverty Line Scheme.

Accidents and life threatening diseases pose a major crisis especially to people who are below poverty line. The Tamilnadu Government Chief Minister's Below Poverty Line Scheme is a great boon to these patients. From the time of its inception, the orthopaedic unit has willingly participated in the scheme in spirit and action and to date has performed more than 9000 major orthopaedic spine and joint replacement procedures making it the largest service provider of a single speciality in the country.

Total Number of Surgeries					
Surgeries	2012	2013	2014	<b>2015</b> (Up To Mar)	Total Surgery
Spine Surgery Joint Replacement Knee Surgery Reconstructive Process Neuro Surgery Non Union	597 113 81 173 6 43	658 177 84 194 20 19	503 117 79 284 6 18	112 41 27 41 1 5	1870 448 271 692 33 85
Grand Total	1013	1152	1007	227	3399

## Corporate Social Responsibilities



Project SWASAM was inaugurated by former President of India Dr. APJ Abdul Kalam. 'SWASAM' is a constellation of several ongoing as well as new projects in the Orthopaedic and Plastic Surgery Departments which are started with the basic idea of helping our patients from low socio-economic status. These projects have brought in a 'breath of new hope and life' to hundreds of patients who are poor and not able to afford the benefit of modern treatment.



Ganga Spine Injury and Rehabilitation Centre is a corporate social initiative by the Ganga Hospital, to provide state of the art rehabilitation services to spinal cord injured patients at an affordable cost. The centre has 33 beds with modern infrastructure for physiotherapy services with trained personnel for physiotherapy, occupational training, vocational service and medical care. The rehabilitation services aim to provide training in assisted walking, independent transfers to the wheel chair, vocational training, occupational support, psychological counselling, urological care, diet advic and social support services.

The Vocational rehabilitation team at Ganga Hospital provides free vocational training to both the beneficiary as well their family members. The skills provided include computer skills, motor winding, Worli art, handicrafts, tailoring, flower bouquet making etc. This training is given to make them financially independent after the rehabilitation is complete. Enabling the family members with skills ensures sustainability of the training thus equipping them to re-join the community and perform most professional tasks.

#### **Facilities**

33 Inpatient Capacity 3 Private Rooms 3 Semi Private Rooms 2 General WardS

- Free Vocational Training Units to learn tailoring, embroidery and umbrella making are available to in - patients and their caretakers.
- Indoor Therapy area encompassing 5000 sq. ft of imported physiotherapy equipments for muscle strengthening, enhancing mobility, balancing and learning daily activities.
- Outdoor Wheelchair training area allows patients to manouevre different terrains and levels to adapt easily to moving around in public areas.
- Recreation Space (for indoor and outdoor games with a specially designed basket ball court).



Ganga Spine Injury and Rehabilitation Centre



















Rehabilitation (including physiotherapy, occupational therapy and wheel chair) worth many lakhs of rupees is provided at a highly subsidised cost or completely free by generous donations from Ganga **Orthopaedic Research & Education Foundation and benevolent** donors.

Ganga Spine Injury and Rehabilitation Centre

## WHAT GSIRC OFFERS?

- Physiotherapy
- Occupational Therapy •
- Vocational Training •
- Counselling & Teaching Sessions •
- Social Welfare Programs
- Wheel Chair Assessment & Training •
- Orthotics and prosthetics •
- Urology service
- Nursing specialists •
- Community Based Rehabilitation •
- **Recreational Therapy**



## Cerebral Palsy Day Celebration



In India there are about 25 lakh children suffering from cerebral palsy.







## Painting competition for Spastic Children

To mark the National CP day, Ganga Hospital conducted a painting competition for CP children, followed by an awareness talk on cerebral palsy for parents. About 40 differently abled children participated in this event. Former patients and inmates of Aashirvad School run by the Coimbatore Spastic Trust and AMRIT School for Special needs participated.

There were three categories of events – collage, coloring and painting. The winners were given prizes by the chief guest Rtn.KamleshRaheja, Governor 2015/16, RI district 3201 and Mr K P Rajagopal from Novartis. Rtn. T. C. VidyaSankar, President, Rotary Club of Coimbatore Central was the guest of honour. MsGayathriBalaji, Honorary Treasurer of AMRIT- School f or Special Needs and MsPriya Joseph, Executive Treasurer of Coimbatore Spastic Trust graced the occasion.

# Ganga Hospital

## **1st Ganga Hospital Founder's Oration** Friday 14th June, 2013



The first Ganga Hospital Founder's Oration was held on Friday 14th June, 2013. Ganga Hospital, founded in 1978, has grown into a 486 bedded hospital standing tall as an example of academic and professional excellence. To celebrate the journey of the founders who inspired the team to reach such great heights, the Founder's oration has been instituted since 2013.

Dr. Devi Shetty, Chairman, Narayana Group of Hospitals, Bengaluru delivered the first Founder's Oration on the topic of 'Affordable Health Care'. Hon. Justice Shri P. Sathasivam was the Chief Guest. Shri. D. R. Kaarthikeyan, Former Director CBI, India and Shri. K. Venkatraman, MD & CEO, Karur Vysya Bank felicitated the occasion.

# Founder's Oration

## **2nd Ganga Hospital Founder's Oration** Saturday 1st November, 2014



The second Ganga Hospital oration was held on Saturday 1st November 2014. Mr. N. Gopalswami, IAS(Retd), Former Chief Election Commissioner of India, delivered the second Founder's Oration on "Governance and the Governed". Mr. N. Gopalswami is known for his uprightness and hardwork. He joined the Indian Administrative Service in 1966 and served exemplarily in various capacities as secretary, Department of Culture, Indian Home Secretary, Commissioner of Surat and Chief Election Commissioner before his retirement in 2009. Mr.Krishnaraj Vanavarayar, Chairman of Bharatiya Vidya Bhavan Educational Institution presided over the function.

## Leadership in Professional Bodies



Prof. S. Rajasekaran **ISSLS** Past President

### **President - The International Society for the** Study of the Lumbar Spine (ISSLS), 2012.

Dr S Rajasekaran was the President of the ISSLS for the year 2012. He presided over the society during the year of SpineWeek 2012 in Amsterdam and delivered the Presidential Oration on the topic "Publish to Flourish – Are we corrupting Science? (youtube link : http://www.youtube.com/watch?v=NIAY3-xYOQ4)



Dr Rajasekaran with the six Past Presidents of ISSLS (from left to right) - Dr Marek Szpaski, Dr Howard Ann, Dr Rajasekaran, Dr Kaneda, Dr Edward Hanley and Dr Margreta Nordin and Dr Scott Boden at the ISSLS Banquet, Amsterdam.



## **President - Association of** Spine Surgeons of India (ASSI) 2008 - 2012

Dr S Rajasekaran was the President of the ASSI for two terms (from 2008 to 2012). During this period, many academic and research activities were started in the association and he was responsible for introduction of the following:

- ASSI Awards for Basic Science and Clinical Science Research
- ASSI Young Investigator Award
- ASSI Best Publication Award
- ASSI Textbook of Spinal Infections and Trauma
- Indian Spine Surgery Registry
- ٠ Two year ASSI Spine Surgery Fellowships



#### **Treasurer and Board member SICOT**

SICOT-Treasurer 2012-15 Dr Rajasekaran will be the Treasurer and the Board of Director for SICOT. He will also be the Scientific Committee Chairman for the Spine Section of the Society.



#### **President - Tamilnadu Orthopaedic Association**

The Tamil Nadu Orthopaedic Association (TNOA) Dr Rajasekaran was the President of the Tamilnadu Orthopaedic Association for the year 2012.

#### Secretary, Association of National Board Accredited Institutions

ANBAI, is an association formed to promote and integrate the academic activities and interests of the National board institutions in 2011. Dr Rajasekaran is the Founder Secretary of the Association till date.



President

'Pledge to Give'

**Programme of IOA** 

Each Surgeon,

**One surgery Free** 

**Total - 6652** 

**Surgeries free Total Value** 

22.5 crores

(US\$ - 4.5million)



Dr Rajasekaran was the President of IOA for the year 2012. His Presidential Theme for the year was ' Knowledge is Power, Skill is Strength'. Under the Presidential banner, the following activities were conducted:

1) 136 short term internal fellowships in the country A record of 136 fellowships were conducted which allowed surgeons from all parts of the country to travel to centres of excellence of their choice to upgrade their knowledge and skills.

2) Bone & Joint Day Declaration August 4, the day the IOA Charter was signed was declared as the Bone & Joint Day and a special day cover was released by the Department of Posts and Telegraphs. To commemorate the occasion, members of IOA conducted one surgery free of charge. A total number of 6542 surgeries were done carrying a value of free surgeries of nearly 22 Crores. In addition, numerous health camps and public education activities were conducted across the country.

country.



Supreme Court

SC charts course for safe roads CONCERNICITER BULLER ROA



## Leadership in Professional Bodies

### **President - Indian Orthopaedic Association 2011 - 2012**

#### **Public Interest Litigation for Road Safety**

(Rajasekaran Vs Union Government of India, Writ Petition No.295 of 2012)

India now has the highest number of road traffic deaths with one death on the roads every three minutes. 7.5 lakh people are involved in road traffic accidents, many of whom are permanently disabled. More than 3% of the GDP of the country is lost in the treatment of road traffic accidents. Many victims of road accidents are injured for no fault of theirs.

Dr Rajasekaran, during his Presidency of the Indian Orthopaedic Association in 2012, initiated a Public Interest Litigation in the Supreme Court of India. The petition was heard in the Court of the Chief Justice of India and a landmark judgement was delivered by Justice P. Sathasivam, Justice Ranjan Gogoi and Justice N V Ramana on 22nd April 2014. The Supreme Court appointed a committee comprising of Hon'ble Mr. Justice K.S. Radhakrishnan, Retired Judge, Supreme Court of India, Mr S Sundar, Former Secretary, Ministry of Surface Transport, Government of India and Dr (Mrs) Nishi Mittal, Ex Chief Scientist, CRRI to look into the issues of road safety on a continuous basis and ensure that uniform action is taken in all the states of the

## Leadership in Professional Bodies



## **Dr J Dheenadhayalan**

**AOTrauma Faculty** Assistant Editor - Indian Journal of Orthopaedics (IJO)-2012-2014 Editor - Tamilnadu Orthopaedic Journal 2011 to 2015

#### **Dr Ajoy Shetty**

Executive committee - Association of Spine Surgeons of India (ASSI) Community Development Officer - AO Spine, India Reviewer - Indian Journal of Orthopaedics, Global Spine Journal





#### **Dr Balavenkat**

Founder, Past President - Academy of Regional Anaesthesia of India. National Executive Committee Member, International Trauma Care, Indian Chapter. Course Director, Aesculap Academy Regional Anaesthesia Guidance Centre. Editorial Board Member, Indian Journal of Anaesthesia, Journal of Research Society of Anaesthesia and Clinical Pharmacology. Member, National Resuscitation Guidelines Committee.

#### Dr Sundararajan S R

Vice President -Indian association of sports medicine Joint secretary - Indian Foot And Ankle Society Treasurer - Tamilnadu Arthroscopy society General council member -Indian Arthroscopy society





#### Dr P Dhanasekara Raja

Executive council member, Indian Arthroplasty Association 2013-14 Reviewer, BMC musculoskeltal journal Associate Editor, TNOA journal

#### Dr Rishi Kanna

Advisory Board Member, European Spine Journal (2015) Reviewer, Indian Journal of Orthopaedics (since 2012) Guest Editor, Orthopaedic Principles (since 2012) Road Safety Committee, Indian Orthopaedic Association (2012-13)





#### **Dr Venkatadass K**

Website Committee Member - Indian Orthopaedic Association, 2012

## Milestones

1978 Ganga Hospital started as a 17 bedded Polyclinic August 1991 & Plastic Surgery. Expanded to 45 beds with 2 new Operating theatres January 1993 Establishment of micro surgical facilities for spine surgery June 1995 Government of Tamil Nadu Recognised for DNB in Orthopaedic Surgery, National Board of Examinations January 1997 June 1997 "Helpline Project" in association with Coimbatore City Round Table 31 August 1997 increases to 110 January 1999 June 2000 January 2001 Ganga Trauma Fellowships June 2001 Diploma in Trauma Nursing June 2002 Ganga Johnson & Johnson Fellowships instituted for Spine and Hand Surgery December 2002 Ganga Charitable Trust for Orthopaedic Research and Education Inauguration of Prof T.K. Shanmugasundaram Orthopaedic Library April 2003 January 2004 Surgeons of India ISSLS Lumbar Spine Research Award 2004 by ISSLS, Canada June 2004 July 2004 Inauguration of Digital X Ray Unit November 2004 December 2004 Establishment of Institutional Review Board Jan 2005 Yves Cotrell Foundation Award, Paris May 2005 MacNab-LaRocca Fellowship Award, ISSLS June 2005 Recognition as Reference Centre for Computer Assisted Surgery July 2005 Hari Om Ashram Alembic Research Award from the President of India September 2005 Dr S Rajasekaran took over as President, WOC-International. Januray 2006 Clinical Excellence Award for Computer Assisted Surgery Harvard Medical International - Wockhardt Award for Medical Excellence January 2007 March 2007 Asia Pacific Orthopaedic Association Operative Spine Course Inauguration of Shoulder-Elbow Unit April 2007 May 2007 Shift to the New Premises with bed strength of 420 and 17 Operating theatres June 2007 University Inauguration of 'Uyir' - A people's movement against road accidents September 2007 Asia Pacific Orthopaedic Association Spine Award January 2008 Eurospine Open Paper Award.

- Establishment of Shanmuganathan Kanakavalli Super Speciality Centre for Trauma, Orthopaedics
- Basic Nursing Course Approved by the Department of Human Resource Development,
- Expansion with construction of New Block to include four new Operating Theatres, Total bed strength
- Recognized by World Orthopaedic Concern (WOC) for Inland Training Fellowships Recognized for Super Speciality Fellowship in Spine Surgery by the National Board
- ASSI-Depuy Publication award and ASSI-Depuy Best Spine Research award by Association of Spine
- Launch of Vector Vision Virtual 3D Computer Navigated surgery (First time in India).

- Dr J Dheenadhayalan took over as Secretary General elect of WOC-international.
- ASSI Depuy Spine Research Award and ASSI-Depuy Best Spine Research Award
- Diploma in General Nursing and Mid-wifery (Recognized by Nursing Council of India)
- B.Sc Physician Assistant, Emergency Medicine Course started in collaboration with Avinashilingam

Milestone	S
2008	Recognised by DSIR
2008	President, Association of Spine Surgeons of India
2009	Approval for Ph D by Dr MGR Medical University
2009	Inauguration of SWASAM project by Dr APJ Abdul Kalam
2010	ISSLS Spine Research Award
2010	Ganga Institute of Health Sciences
2011	DSIR Recognition as a research center
2011	DBT approval for DTI project
2011	President of Indian Orthopaedic Association
2011	Approval for PhD Program by TamilnaduDr MGR Medical University & Madras University
2011	Approval for PhD program by University of Madras
2011	Hunterian Oration, Dublin, Ireland
2011	Inauguration of Project SWASAM by Dr APJ Abdul Kalam
2012	President of ISSLS
2012	ISSLS Spine Research Award
2012	ISSLS Presidential Oration, Amsterdam
2012	Elected as a member of ISOC
2012	Initiated a Public Interest Litigation on Road Safety as President of Indian Orthopaedic Association
2012	NABH Accreditation
2012	Inauguration of RASTRA
2013	1st Ganga Hospital Founder's Oration by Dr Devi Shetty
2013	ISSLS Basic Science Award 2013
2013	IOA Basic Science Research Award
2013	ASSI Basic Science Research Award - 2013
2014	Aospine International Research Commission Chair
2013	ASSI Publication Award 2013SICOT Plenary Oration, Hyderabad
2013	SICOT Plenary Oration, Hyderabad 2013
2014	2nd Ganga Hospital Founder's Oration by Mr N Gopalswami, Former Chief Election Commissioner
2014	ISSLS Spine Research Award
2014	ASSI Basic Science Research Award
2014	Inauguration of Ganga Spine Injury and Rehabilitation Centre
2014	Indian Orthopaedic Association Silver Jubilee Oration
2014	IOA Prof Joy Patankar Gold Medal
2014	Landmark Judgement delivered by Supreme Court on Road Safety
2014	First Unit in ASIA to have AIRO Intra-operative CT Navigation machine
2014	Prof Ramanathan Consultant Gold Medal - Tamil Nadu Orthopaedic Association
2014	Adjudged Best Orthopaedic Hospital by 'The Week'
2014	President Elect, SICOT
2014	AOSpine Research Commission Chair(2014 July to 2017 July)