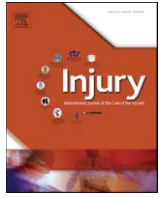


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Injury

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Guest Editorial

Hand surgery became a specialty when surgeons recognized that special skills are required to treat injuries and infections of the hand. The need became acute at the times of war. When peace dawned, it was followed by rapid industrialization and hands were the most commonly injured parts of the body at the work place. With the introduction of safety practices, the incidence of industrial injuries reduced and elective surgery practice increased in the developed world. In the developing economies, where 80% of the world's population lives, hand injuries are unfortunately very common and form the main bulk of the practice of the surgeons in these areas. In many parts of the world the care provided for hand injuries fall far short of the desirable minimum level of care. While that is the state of affairs for the 80% of the world's population, the effects of war and terrorism have shown that no country is immune to the problem of mutilated hand injuries. So the topic remains current to the present day and deserves discussion.

The International Federation of Societies for Surgery of the Hand (IFSSH) and International Federation of Societies for Hand Therapy (IFSHT) will be held in New Delhi, India in March 2013. Leading international scientists will meet to discuss novel, innovative reconstructive techniques, and therapeutic modalities. Surgeons and therapists from around the world will convene at this major scientific conference to explore the latest and most noteworthy developments in hand surgery and hand therapy today. Current issues in clinical practice and surgery, as well as landmarks in research will be discussed in clinical and scientific symposia and a diverse collection of topics and innovative techniques will be presented. The international faculty is expected to bring to the forefront a broad range of practical experiences, expertise and basic research. The goal of the meeting is to bring these international specialists together in one significant scientific forum in order to enhance the scientific knowledge regarding the management of tissue loss due to disease or trauma, as well as the reconstruction and rehabilitation of these tissue defects of the upper extremity.

In preparation for this triennial IFSSH-IFSHT congress, we were given the opportunity to highlight the current concepts in Hand Surgery and Therapy from the leaders in the field in this special Issue of *Injury* devoted to the *Recent Advances in Trauma and Reconstructive Surgery of the Hand and Upper Extremity*. This special supplement highlights some of the topics that will be presented at the Congress, and hence covers a broad range of issues including flaps, composite tissue transplantation, bone, nerve, surgical techniques, and rehabilitation modalities, among others.

In recent years there have been numerous advances in surgery of the hand and upper extremity, including more effective management of tendon, bony and neural injuries, neuropathies, arthritis, as well as rehabilitation.¹ The shoulder joint has a wide range of motion with a complex interplay of soft tissue and bony structures. As the shoulder is the most frequently dislocated joint in the body, the surgeons are required to consider the type of injury (traumatic vs. nontraumatic); the presence of recurrent instability, and bone deficiency, when selecting among management options.² The surgical management of paralyzed muscles in brachial plexus palsy involves state of the art nerve reconstruction methods, including nerve and muscle transfers. Recently there has been an increased effort to identify specific nerve transfers close to the muscle target to enhance better results.³ The clavicle connects the shoulder girdle to the axial skeleton, providing support and mobility for optimal upper extremity function. Fractures of the clavicle comprise up to 45% of all injuries to the shoulder girdle,⁴ stressing the importance to address the indications, surgical techniques for adequate clavicular reconstruction. Recently, efforts have been made to use vascularized fibular flaps in these reconstruction efforts. The first set of papers in this special issue are devoted to the special considerations of trauma and reconstructive surgery of the shoulder.

Trauma of the upper extremity entails large skin defects, peripheral nerve injury, vascular injuries, muscle and tendon ruptures, as well as severe bony defects. Over recent years, hand surgeons have made considerable contributions in managing the unique demands of complex upper extremity injuries, including functional muscle transfers, nerve transfers, and composite tissue allotransplantation. Open injuries of the hand and upper extremity are complex injuries that require technical expertise in both skeletal and soft-tissue reconstruction. Management goals are union of the fracture, repair of soft tissues, restoration of function and prevention of infection. Good results are dependent upon correct, early management by well-trained hand surgeons who will not underestimate the severity of the injury. Evaluating the severity and importance of a hand injury in relation to other injuries is particularly demanding in multi-traumatized patients with major fractures or dislocations or severe injuries to other organ systems. The neglect or postponement of treatment of the hand in favor of other sites will very often result in its permanent disability. These injuries require the timely application of the latest methods of skeletal and soft-tissue reconstruction.⁵ The second set of papers in this special issue focuses on the management of traumatic injuries of the hand, wrist and upper extremity.