

# “On Arrival Block”—Management of Upper Extremity Trauma with Resuscitation in the Operating Room

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**Summary:** “On Arrival Block,” wherein a brachial block is given to a severely injured upper extremity as the first step of the management protocol in the main operating room, bypassing the emergency department, has been found to be a “game changer” in trauma care. Immediate pain relief on arrival builds confidence in the system, allows pain-free initial examination, facilitates use of tourniquet if there are major bleeding wounds, and allows us to obtain good radiographs without an overlap of bones, which usually happens when the radiographs are taken within a bandage. Using the “On Arrival Block” system, emergency room assessment and resuscitation is bypassed. The patient is resuscitated only once, instead of twice. This avoids much duplication of effort, wasted time, patient suffering, unnecessary costs, and mistakes generated by miscommunication between 2 resuscitation teams. This can be done only in the place where all the resuscitative equipment and drugs are available. A senior anesthesiologist and surgeon must be available. The only contraindication is the suspicion of a brachial plexus injury, which can cause the local anesthetic to seep in through the open dural sleeve and cause total spinal anesthesia. “On Arrival Block” was set up at Ganga Hospital, Coimbatore, India, during the early 90s by the anesthesiologist Ravindra Bhat and the plastic surgeon Raja Sabapathy out of necessity, who recognized its value and made it the standard of care. (*Plast Reconstr Surg Glob Open* 2020;8:e3191; doi: [10.1097/GOX.0000000000003191](https://doi.org/10.1097/GOX.0000000000003191); Published online 29 October 2020.)

## INTRODUCTION

A short “hospital arrival-to-surgery interval” time, rapid pain relief, and early and efficient resuscitation are key factors in obtaining good outcomes after a major trauma to the upper limb. Consistent delivery of these parameters depends upon systematic and routine management of this “dramatic” period in a patient’s passage through any surgical unit. This article discusses the development of a system of care at Ganga Hospital, Coimbatore, India, whereby senior anesthesiologists and surgeons work together to receive patients with major upper limb injury in the main operating room, bypassing the emergency room.

Arguably, the most significant feature of this system of early management is “On Arrival Block,” by which a

brachial plexus block is administered to a patient who has sustained a major injury to the upper limb upon his arrival at the hospital, as the first step of the management protocol in the main operating room instead of in the emergency department. Assessment, resuscitation, and further management of the patient follow.

“On Arrival Block” has many advantages:

1. Immediate pain relief, a humane principle, and one which improves patient confidence in the system.
2. Avoids administration of major opioids for pain, which can create difficulties during the assessment phase of the injury.
3. A tourniquet can be applied without causing pain before the initial dressing is removed in anticipation of massive bleeding.
4. Permits a pain-free detailed clinical evaluation of the injury.

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