# New Implants in Trauma Surgery and Trauma Education - Viewpoints of Experts

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Trauma as a faculty is developing rapidly along with understanding of fracture patterns, change in trauma scenario and also development in new implants. However outreach of these new developments and percolation and applicability of these new developments is still a big question. We see cases that are complicated by wrong choice of surgery, wrong choice of implant and improper use of principles. Trauma International tried to interview the core team of Trauma Society of India on these two question of new implants and education and research in field of Trauma. We have compiled the responses in this editorial

Dr DD Tanna: New implants like the precontoured anatomical plates are really good. They are definitely expensive but are good. Some Indian companies are also producing excellent variants of the anatomical plates and I believe these will definitely help in better management of complex articular fractures. However I also believe that not every new implant is a real improvement over the previous one. We have to wait for the clinical results and we have to be smart in selecting our cases to use these implants

Trauma education is an ongoing process and we are all students at the same time. We have to continue to learn how to learn, only then we can learn about the new methods and technologies and also learn them well. It is essential for our growth as a surgeon and helps us deliver best treatment to our patients

Dr Sudhir Babhulkar: New implants like fragment specific fixation and anatomic contoured plates are an excellent addition to armamentarium of a trauma surgeon. However we should learn to use them wisely and carefully

Teaching the young generation is the key to spreading trauma education. Traumacon has created that interest in young surgeons about trauma. We need to focus on them and help them develop proper understanding of principles and correct execution of surgical techniques. Conferences, courses workshops all are needed to achieve this aim. Also teaching about correct principles and techniques should reach periphery. My practice has been 50 to 60% complicated reffered cases. Most of the cases were complicated because of wrong application of surgical principles. I think teaching that will address these issues the correct solution for trauma education in India.

Dr GS Kulkarni: About new implants, some of them are really useful in certain situations like fragment specific fixation and contoured plates, but some new implants are not as useful as they are made to appear. New implants should be focussed on solving a surgical problem and should not be innovation for the sake of innovations. We have our innovation which is slotted plate for lengthening over a plate and it is aimed to solve a particular problem. I think that is how innovation should be aimed at.

The focus of trauma education should be basics of trauma surgery. That is where many complications arise. Especially as cases of road traffic accidents are rising, basics of management of open fracture should be emphasised more. Principles of debridements, wound closure, when to close the compound wound, methods of closing the wound, external fixation and stabilisation of compound fracture should all be reviewed and highlighted again and again. Another area is use of antibiotics in fracture surgery specifically local and systemic therapies. Current evidence and experience suggest that with proper surgical management, a single day antibiotic therapy is enough. However most surgeons will give either three day or five day antibiotic

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therapy which is not good for the patient as well as the fracture. If there is a need for prolonged infection control use of local antibiotics systems like cement beads or cement rods should be utilised to reduce the systemic load of antibiotics. Even in cases of closed fracture proper surgical principles should be followed. For example if a surgeon is using locking plates without understanding the principles of locked plates, it becomes a dangerous implant in his hands and is one of the main cause of complications.

Dr SC Goel: There are new implants launched every year and such developments should be taken with pinch of salt. Lot of these may be industry driven and we need good multicentric trails to validate the results before using them

About education and research, I feel we should have focus on basic sciences too. Unfortunately there are not many basic science labs in India. There are many surgeons who have innovative ideas and techniques but do not get a chance to promote their ideas. I think either TSI or IOA should take these projects ahead and give a chance to all innovators to come forward

Dr Sushrut Babhulkar: The science of orthopaedic trauma is evolving and our understanding of it is changing and that is reflected in development of new implants. New implants in trauma are very different from new implants in Arthroplasty where it is more industry driven rather than real evolution. As our understanding of fracture pattern and soft tissue injury improves and as we encounter more varied bone quality, the need for new implants will increase. These improvement in basic understanding is what fuels development of new implants in trauma and I think we are moving forward in sensible direction as far as trauma implants are concerned

Education should focus on accurate understanding of principles of trauma surgery and principles of various implants. Both should be used in perfect harmony to achieve excellent result. If either of these principles are not followed, it would lead to complications. This is the main teaching of Traumacon every year. Again research should be promoted but not enforced, if it is enforced, we will get more poor quality research and publications.

Sunil Kulkarni: We are facing new challenging in trauma surgery and number of complex and articular trauma has increased due to high energy accidents. I think new implants have helped us a lot in dealing with these complex injuries. Although simple trauma is still managed well with conventional implants, so proper patient selection is essential.

Trauma education should be about practical knowledge. Textbook knowledge is not of much use in clinical practice. Especially trauma is a branch where even after decades of practice, on can see a completely new case of face new surgical challenge. Education should be focussed on preparing trauma surgeons to face these challenges and difficult practical problems.

Dr Amit Ajgaonkar: New implants have definitely added more tools for trauma surgeons. Implants like Halifax nails, fragment specific fixation, far-cortex locking plates are based on sound principles and have definite advantages in properly selected cases

Trauma Education should focus on peripheral surgeons. In recent months I have travelled a lot across the country and especially in the interiors. I realised that maximum trauma work is done by the peripheral surgeon in rural settings. There is an urgent requirement to provide both training as well as infrastructure to these places. I think TSI, IOA and Traumacon can contribute a lot in terms of improving the training but government should also focus on improving the infrastructure.

If we carefully note the views of all the experts above we can deduce a chain of thought which can be summarised easily. New implants are good but understanding of the principles behind the implant and proper patient selection is must. As far as trauma education is concerned, all the experts believe basic principles are the building blocks and practical knowledge is of utmost importance. I too believe that trauma Education and research are not different entities, both are actually part of one spectrum. Academics originates from new research and initiation of research is from academics. Thus they both fulfil each other and through the churning of both these, innovative ideas and new implants are born.

We thanks our panel for sharing their thoughts with us and we leave the readers now to enjoy the current issue of TI

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Conflict of Interest: NIL
Source of Support: NIL

How to Cite this Article

Tanna DD, Kulkarni GS, Babhulkar S, Goel SC, Babhulkar S, Kulkarni S, Ajgaonkar A, Shyam AK. New Implants in Trauma Surgery and Trauma Education - Viewpoints of Experts. Trauma International. Sep - Dec 2017;3(2):1-2.