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Editorial

Learn through innovation, research and publication

It is a fact that the total population of researchers is continually rising every year, including in India. “Publish or Perish” is a common phrase used among the academicians. The innovation, research, and publication are necessary for both the clinicians and scientists to learn and progress further in their career. It has now become a necessity for all of us, as even Promotions and career progression are directly proportional to it. Every year country is faced with different and unique problem, be it the scourge of viral arthralgia, resistant tuberculosis, cancers etc. So, it is imperative to research on these problems and provide solution to society in this part of world. With this objective, *Journal of Clinical Orthopaedics and Trauma* (JCOT) the research arm and mirror of Delhi Orthopaedic Association (DOA) was conceptualized.

JCOT has witnessed tremendous growth with a healthy increase in article submission over the last four years with a CAGR (compounded annual growth rate) of 49% from 2012 to 2015. Article submissions till August 2016 have already increased from full year submissions of 2015 by 14% despite increase in rejection rate to 68%. The article downloads have also increased at a rapid rate of 81% CAGR from 2012 to 2015, and more than 50% article downloads are from North America, Europe, and Australia. Furthermore, there is 62% growth in citations of JCOT from 2014 to 2015. *So to accommodate, What's New this Year? The editorial board has increased number of issues from 4 to 6, 2 Supplementary Online Issues are being added. The genesis of special issue twice a year and yearly recognition of best publication in JCOT.* On popular demand, we will also start paper publication workshop as an annual affair. JCOT is indexed in Scopus, PubMed, and Embase so the editorial board appeals to all to make it their two f's that is first and favorite choice to publish.

The previous issue of JCOT was special issue, focusing on the science of cartilage restoration and regeneration, and in this issue we have focused on trauma and knee surgery, and hence this issue includes several innovative, full length, original research and review articles on the related topics. Mitchell et al.¹ have analyzed a large number (20,090) of orthopedic trauma cases in Nashville (USA) and found that the orthopedic resident's involvement in these cases did not significantly impact the 30 days outcomes and therefore justified their involvement in the care of trauma patients. Quirk et al.² demonstrated in an experimental model of rat femoral fractures that near infra red light increases the cellular ATP production and thus accelerates callus formation and early healing. Measurement of osteofascial compartment pressure in cases of closed limb injury with suspected compartment syndrome is helpful in guiding the surgeon for timely decompression. Beniwal and Bansal³ have revisited Whiteside's technique and found it to be

a safe, inexpensive, reliable and easily assembled method for clinical use. Agu and Ojiaku⁴ from the Imo state (Nigeria) have reported traumatic gangrene as the commonest case of major limb amputation in their population. Since the traumatic injuries are largely preventable, there is a need for intensification of the public campaign about road safety measures right from school level to reduce the incidence of these drastic limb amputations. Another serious complication of trauma is a hemorrhagic shock (HS) which is a leading cause of death. Dysfunction of hematopoietic progenitor cells (HPCs) has been observed during severe trauma and HS.⁵ Impaired HPCs may lead to persistent anemia and risk of susceptibility to infection, sepsis, and MOF. There is a need to reactivate impaired HPCs during trauma hemorrhagic shock.

Reconstructive knee surgery is one of the commonest procedure done these days. The innovations, better understanding, and improvements in the surgical practices have led to better outcomes of this procedure. Agarwala et al.⁶ report mid term follow up of comparison of open versus closed wedge high tibial osteotomy (HTO) in medial compartment osteoarthritis (OA) and found better outcomes and functional scores with an open wedge than a closed wedge osteotomy. It corroborates with increasing trend of using open wedge osteotomy these days. In another prospective series of 46 middle aged patients, Vaishya et al.⁷ reported an innovative technique of performing simultaneous arthroscopic ACL reconstruction and a medial open wedge HTO, without using any metallic implants. With this cost effective technique they could provide adequate pain relief, restoration of knee stability and alignment for their patients with ACL tears with associated OA. Monitoring physiotherapy and the progress of operated patients after knee surgery is often a challenge for the surgeons. Vaish et al.⁸ reported a new technique of using an i-phone application for D+R therapy to monitor physiotherapy of the patients from their office. It seems an excellent and cost effective method of managing the progress of the post operative cases. Restoration of a proper limb alignment and soft tissue balancing are key surgical aims to achieve a perfect TKA. Smith et al. from Florida (USA) present an extensive review of 69 publications reported⁹ that the use of intra-operative sensors improves both soft tissue balance and overall functional outcomes at a relatively low price. It may, therefore, influence lower TKA revision rates in future. Similarly, measurement of the mechanical axis on long leg radiographs is considered useful to assess the pre operative deformities of the knee and to check on the restoration of limb alignment after TKA. Vaishya et al.¹⁰ reported intra observer variability in these measurements and found that the accuracy depends on of the experience of the personnel.

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