

Upsurge of Sports Injuries and Their Treatment

Sports medicine is a relatively new subspecialty of orthopedics. Sports are gaining the desired recognition all over the world, including India. People, at large, are getting increasingly concerned about their health and fitness and therefore, the sports medicine specialty also seem to have dropped the veil of anonymity. The sports medicine has witnessed a technological revolution in the diagnostic, clinical and rehabilitation areas which has taken the treatment to the next level. There have been many recent advances in the understanding of the pathophysiology, diagnosis, and management of sporting injuries, and academic rigor is now being applied to clinical problems which were previously managed on the relatively empirical basis. New research in this field has drastically changed the perception and management of sports injuries.¹ The clinician interested in these areas has been contributing their research work in relevant journals, and the contribution from Indian authors is rising.² Hence, this special symposium in Indian Journal of Orthopaedics is quite relevant in the present scenario.

Present sports injury symposium has several interesting review and research articles from wellknown Orthopedic surgeons in the field of sports injury, from all over the world. Anterior cruciate ligament (ACL) injuries and its reconstruction are always in focus during any sports injury related meeting or symposia. There has been a paradigm shift in the understanding, management, and prevention of ACL tears.³ The current concepts in this field are discussed related to various technological advances, expansion in biomechanical and basic science research, resurging interest in ACL preservation, and expanding efforts regarding injury prevention.^{4,5} ACL reconstruction techniques have improved significantly in the recent past, but there remain some controversies related to anatomic placement of the graft, graft fixation techniques, type of graft, etc. The unsatisfactory outcome with conventional ACL reconstruction has been attributed to nonanatomic graft placement. Anatomic ACL reconstruction by accessory anteromedial portal was found to be a reproducible technique which gave good clinical outcome at short-term followup, in a series of 62 cases.⁶ In one original study, the same clinical results were found at medium-long followup with cortical and cortical-cancellous suspension femoral fixation techniques. However, cortical-cancellous fixations seem to provide greater stability to the reconstruction.⁷ ACL reconstruction is mostly considered a safe and reproducible technique. However, there remains an underlying rate of failure to return to preinjury sporting activity levels, and in these cases, postoperative laxity and graft re-injury remain a cause of concern. Previously unrecognized meniscal lesions, disruption of the lateral capsule and extracapsular

structures were considered potential avenues to treat and to, therefore, improve kinematic outcome and functional results, following reconstruction.⁸

Native joint preservation has gained importance, especially in younger individuals. Hence, techniques involving cartilage restoration,⁹ meniscal preservation, realignment procedures (involving osteotomies, and patellar realignment) are finding greater recognition among arthroscopic surgeons. This is because it has now been recognized that the menisci perform critical functions, adding stability during a range of motion and efficiently transferring load across the tibiofemoral articulation while protecting the cartilage. Advances in technology and our knowledge on the functioning of the knee joint have made meniscus repair an important mode of treatment. A review article has aptly summarized various techniques of meniscus tear repair and also described biological enhancements of healing.¹⁰ Malalignment of the knee can cause debilitating symptoms and the surgical options to address it include realignment osteotomies and joint replacements. Realignment osteotomies are the more appropriate option in younger and active individuals. The available evidence indicates good cartilage regeneration and functional outcomes with a realignment osteotomy alone, and studies have shown that the results can be further improved with the use of a cartilage restoration procedure, as an adjunct.¹¹ A medial opening-wedge high tibial osteotomy (infra-tubercle) was found to be effective in correcting the malalignment and to prevent patella baja.¹² Patellar instability can be very debilitating in nature and the long term sequelae that can evolve from its lack of adequate recognition and treatment. A review article details the most current methods of evaluation and current surgical treatment regimens that are available to address this condition.¹³

Multi ligamentous injuries and dislocation of the knee are still common after road traffic accidents and contact sports. An early surgical reconstruction of ligamentous injuries has shown better results than with the conservative treatment.¹⁴ The knee dislocations are often extremely challenging to treat. An astute appreciation of the treatment algorithm is essential to plan individualized management of these injuries.¹⁵

After the knee joint, probably shoulder joint injuries are the most common. These may present as impingement syndromes, rotator cuff tear, fractures around the shoulder or with shoulder instability. Two review articles on these shoulder problems, focusing on subacromial impingement syndrome¹⁶ and shoulder instability¹⁷ have provided an up to date knowledge about the management of these conditions.

The constant upsurge in sporting activities across the globe and intense training has caused a proportionate increase in the sports injuries, in the recent times. Due to greater awareness about these injuries, improved diagnostic techniques and methods of treatment, the sport related injuries are now managed in a much-improved way than before and are no more handled with levity. These positive changes might have prevented the physical impairment and early or unceremonious retirement of many professional players!

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Access this article online	
Quick Response Code: 	Website: www.ijonline.com
	DOI: 10.4103/ortho.IJOrtho_431_17

How to cite this article: Vaishya R, Dhammi IK. Upsurge of sports injuries and their treatment. *Indian J Orthop* 2017;51:485-6.