Advocacy for sporting injury prevention and care

Stephen Roche*

Professor of Orthopaedics, University of Cape Town
Deputy Head, Division of Orthopaedics
Head of Adult Reconstruction and of Shoulder and Elbow Surgery, Groote Schuur Hospital
Co-director Orthopaedic Biomechanics Laboratory, University of Cape Town
Co-director Orthopaedic Research Unit, University of Cape Town

**Corresponding author: stephen.roche@uct.ac.za*

The duties and responsibilities of orthopaedic surgeons obliges us to be an advocate on multiple levels within our society. The American Medical Association stated in 2009 that 'Physicians must advocate for the social, economic, educational, and political changes that ameliorate suffering and contribute to human well-being'.

In our troubled South African society, exacerbated by the current Covid-19 crisis, our advocacy is needed even more than ever. We should already be advocates for transformation/diversity, alleviation of hunger, access to healthcare, the eradication of the scourge of gender-based violence, reduction of road deaths and gunshots, among others.

These problems not only directly affect those injured, abused, murdered or dispossessed, but indirectly affect all of us through the massive financial cost to society. The financial burden is compounded by the current economic climate of South Africa which has been worsened by the Covid-19 pandemic and corruption. A report in 2019 states that road accidents cost the state R164 billion, and I am not going to rehash the massive figures of corruption highlighted daily in the news.

In 2017, Case Martin from our university published an article in the *South African Medical Journal* estimating that the cost to treat a patient sustaining an orthopaedic-related gunshot injury was close to US$ 3 000.[1] Moreover, M van Heukelum from Tygerberg Hospital published in the same journal in August 2020 that the global cost to treat gunshots presenting to their department in 2017 was over R10 million.[2]

The Global Peace Index for 2020 by the Institute for Economics & Peace, as reported by the *Mail & Guardian* on 11 Nov 2020, estimates that the cost of violence in South Africa is about 13% of its gross domestic product (GDP).

Our advocacy is stretched to the limit, but we must not forget the other patients we treat.

Sports injuries in South Africa do not receive the same attention in orthopaedic forums as the other burdens documented above. While the orthopaedic implant industry drives the improvement in surgical techniques and implants, it is not directed at injury prevention or access to care in this group of patients. We can see the effects of the injuries by merely watching our national sporting teams; for example, during the Webb Ellis World Cup Rugby final of 2019, we lost Bongi Mbonambi to concussion and Lood de Jager to a shoulder dislocation. It has been well documented that the risk of arthritis is ten times greater after a traumatic shoulder dislocation. I alone have seen more than ten of the Proteas cricket players and operated on more than four in the last three years. Additionally, we have seen our premier fast bowler, Kagiso Rabada, unable to play for three months due to an overuse injury to his lower back in 2018.

The difficulty in addressing sporting injuries is multifactorial. Many of these injuries present to the private sector and are therefore seen in isolation with no collective database to analyse the burden or the prevention of these injuries. In the state sector, the burden of trauma, waiting time for elective surgery, as well as lack of resources makes it difficult to collect decent data on these injuries.

We undertook a student study module by third-year medical students which looked at sporting injuries presenting to the emergency unit at four hospitals in Cape Town in 2012. The study found large numbers presenting to these units following Saturday sporting activities. Another part of this study involved phoning the Head of Sports at the local schools to determine whether they had an insurance plan for these injuries. Sadly, only one of the schools had insurance cover for their scholars. This leaves many of the scholars at the mercy of an overburdened state system where, for example, there is a waiting list of over a year for shoulder surgery in Cape Town. This is even harder for those scholars who are on a sporting bursary to access timely care for the injuries which are not considered an emergency, such as a reduced shoulder dislocation, and I am sure we are all faced by this in our busy clinics.

A paper in the *Orthopaedic Journal of Sports Medicine*, titled 'Pediatric and adolescent shoulder instability: Does insurance status predict delays in care, outcomes, and complication rate?', highlights this problem in California, USA. Their conclusion was as follows: 'Public insurance status affected access to care and was correlated with the development of secondary bony injury and a higher rate of postoperative dislocations. Clinicians should practice with increased awareness of how public insurance status can significantly affect patient outcomes by delaying access to care – particularly if delays lead to increased patient morbidity and healthcare costs'.[3]

To address this, we set up the Sports Orthopaedic Clinic at Groote Schuur Hospital with the collaboration with sports physicians from Exercise Science and Sport Medicine (ESSM) at the University of Cape Town, and I believe there are collaborations like this occurring in other state hospitals.

Prevention is also important and has been shown to be effective in many sports medicine journals, as confirmed in the article titled 'Exercise-based injury prevention in child and adolescent sport: a systematic review and meta-analysis', published in *Sports Medicine* in 2014.[4]

The development of STOP (Sports Trauma and Overuse Prevention) Sports Injuries was initiated by the American Orthopedic Society for Sports Medicine (AOSSM) in early 2007. Dr James R Andrews, a shoulder and sports orthopaedic surgeon, was instrumental in this advocacy to address the issue of overuse injuries in young athletes, which they believe had become a critical issue.

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The private sector needs collaboration and data collection sharing to be able to address this problem. It thus behoves us to be part of the drive by the South African Orthopaedic Association in setting up and running a national registry to enable collation and analysis of injuries. The South African Shoulder and Elbow Society has discussed the higher rates of posterior dislocation of the shoulder due to the clean out and position of the players' arms when competing at the rugby ruck. Sadly, it is anecdotal, and without evidence we cannot advocate rule changes or altering playing techniques to prevent injuries. This has been done very well in the prevention of spinal injuries in rugby with the Boksmart programme.

We need collaborative and translational research with our colleagues in Sports Medicine, but also need involvement of the community, coaches and sports administrators. This process has proven arduous, as we discovered when trying to get the schools, parents and coaches to participate in an injury-tracking study in eight schools in the Cape Town area. Nevertheless, it can be done, as seen by the report by Yale Jamieson at the recent SAOA Congress where he presented on water polo injury factors in schoolboys in the Eastern Cape.[5] This research collaboration with Dr Janine Gray from the ESSM – which was initiated after we observed an increasing number of rotator cuff tears in adolescent water polo players – has led to presentations to water polo coaches and administrators. It has also seen the development of a coaching programme encompassing performance, training, injury prevention, emotional intelligence and coaching. We hope this will be rolled out over the next few months.

Another collaboration with ESSM has led to a paper submitted for publication and presented at the annual SAOA Congress 2020 by Grethe Geldenhuys, titled 'Return to play protocols for musculoskeletal upper and lower limb injuries in tackle-collision team sports: a systematic review of the literature'.[6] The paper highlights the low level of scientific evidence available, and she will soon be sending out invitations to the SAOA to ask for the members to contribute to a Delphi process in improving our return-to-play protocols for our patients with contact-sport injuries.

This editorial is written with the hope that all of you involved in managing sporting injuries will consider your advocacy and involvement in trying to improve the outcomes and access to care for all our patients, especially the disadvantaged and younger sportspeople.

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