Looking back over 20 years of sports medicine prevention and treatment: progress, but still a lot to achieve

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Looking back over the past 20–25 years of taking care of athletes at all levels, we can appreciate substantial improvements. In most cases during this period, the injured athlete returned to sports activity; previously, sports-related injuries were often career-ending.

Credit is due in part to the work of sports traumatologists, pioneers within modern orthopaedics. Mini-invasive surgery, especially arthroscopic techniques, have considerably reduced surgical morbidity. From what previously required an open wound 10–25 cm long, ACL reconstruction is now performed through 2 or 3 stab wounds, 5 mm in size. This means shorter surgical times, shorter hospital stay and improved patient-rated outcomes.

Similarly, sports cardiology has developed and now offers team physicians and athletes preventive measures (cardiac screening, superior ECG interpretation recommendations) as well as improved safety at sports events (automated external defibrillators).

Despite the above achievements, we see room for further improvement in at least four areas.

1. Prevention programmes need better implementation.

Ten to 15 years ago, prevention was almost unheard of, but today, prevention of sports-related injuries is not only possible, but also an important part of taking care of athletes at all levels. For example, the majority of ankle ligament injuries are preventable, and 50–80% of cruciate ligament injuries can be avoided.

However, is prevention implemented to the full extent in clubs/teams? Are we successful in cascading the knowledge of prevention to club coaches? And, if so, are managers and coaches willing to take time off to use preventive measures, such as the balance board, and ‘lose’ 15 min of football training? We fear that knowledge as well as failure to recognise the importance of prevention outside the medical teams both exist.

How do we change that? How do we convince a football coach, who may have lost three consecutive games, to make time for preventive training? This is still an open question. Good communication is probably part of the solution. Because, as we all agree, based on scientific evidence, prevention is better than treatment!

2. Improved rehabilitation

A good example of the positive development in rehabilitation is the modern treatment of Achilles tendon rupture, where the long immobilisation period of 8 weeks is now history. Early range-of-motion training and early weight-bearing, alongside short or no immobilisation and no plaster cast, result in shorter immobilisation time, less stiffness and less pain. There is no doubt that improved rehabilitation also leads to earlier and safer return to sports. The introduction of specialised sports physical therapists has contributed to this achievement.

But can we do better? Approximately one-third of patients with the injury mentioned above are unable to return to their previous level of activity. Most are not top-level athletes, but ‘week-end warriors’, who want to keep fit for general health. How far can we get with improved rehabilitation? We believe we have only begun on the development of specialised rehabilitation.

3. We have to fill the gap between ‘return-to-training’ and ‘return-to-play’

There is an overall lack of knowledge, especially in the lower and youth divisions, on how to practice football-specific training. We think, for example, that many players return-to-play too early and, therefore, there is a very high risk for reinjuries. Sports specific rehabilitation is important, however, it is not optimally implemented at all levels.

4. Large registries report epidemiology of injuries and trends in treatment

ACL rupture registries in Scandinavia, the USA, England, Germany, Australia and New Zealand allow us to follow very large cohorts over long periods of time. The Scandinavian registries have data on >75 000 surgical procedures with follow-up exceeding 10 years. In this way, we can follow patient outcomes and see trends in injury epidemiology.

We can identify the best and the worst techniques (and thereby eliminate the worst techniques). We can identify subgroups that are at the greatest risk of sustaining an injury and reinjury—for example, girls aged between 15 and 20 years. We can also find sport-specific differences in revision rates and thereby create specific secondary prevention programmes for these sports. Ongoing discussion between users to find common data models and data definitions may make research, data exchange and data aggregation easier among countries/registries.

In summary, our multidisciplinary profession, which comes together in Sweden as the Society for Exercise and Sports Medicine (@RedaktorSFAIM), can be proud of fantastic advances during the past 20–30 years. But we still have a lot to learn about the treatment of sport injuries, and our ultimate goal is a ‘zero-vision’—a world free of sport injuries. As an interim step, we must all work hard on our own training to be the most qualified medical staff, and collaborate to offer our athletes the best treatment and rehabilitation available today.

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