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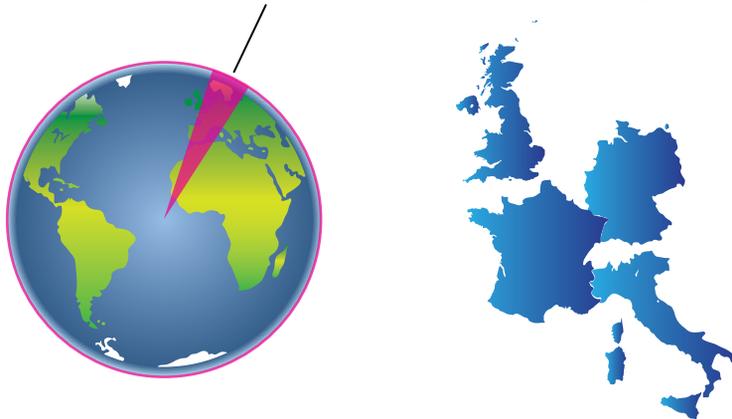
The Evolution and Future of Football Medicine and Science

Football is the most popular sport in the world. Around 265 million men and women play the game, and approximately 5 million referees officiate the game. This equates to 4% of the world's total population¹. The Chinese game *Tsu' Chu*, which was played during the Han dynasty (206 BCE to 220 CE), may have been the earliest form of football. However, 'Association Football', as we know it today, was only born in 1863, when the rules of the modern game were formally codified in England by the Football Association². Since then, we have seen significant evolution of the game: from a sport primarily played by boys in English public schools, to a multi-billion-dollar enterprise played by men and women in parks and stadia all over the world.

Football medicine and football science are two areas that have seen exponential growth. The development of sub-specialties to address issues such as performance enhancement, injury prevention, load monitoring and return-to-play decision-making are some examples of how medicine and science are making an impact in football. Recent changes in football medicine and science are truly revolutionary, and literally life changing: how we manage screening for potentially life-threatening conditions in professional players, and how we resuscitate a player with sudden cardiac arrest on the pitch. Other advances, such as injury prevention programmes and load monitoring, are potential game-changers, but need more buy-in from non-medical and science staff (i.e. coaches, players and other key stakeholders). One challenge for medical and science staff is to develop the types of collaboration with coaching staff that will enhance players' health and performance. This Targeted Topic sees some of the football world's experts in medicine and science share their insights and thoughts about the evolution of these fields, and where we may be headed in the future.

The next steps in the evolution of the game are inevitably the expansion of its participation base. No longer is football a game played by men, celebrated by men and officiated by men. Instead, it is a global phenomenon – inspiring fans and players from all nationalities, age groups and genders. Previously classified as 'special groups', young players and women are now legitimate members of the 'global football family' – a concept that has been vivified by visionaries like Stefano Della Villa. In this issue, we examine the important role youth academies play in nurturing not only future professional players, but well-rounded, productive members of society. We also reflect on the struggle women players have faced to get where they are today, and how the football medicine and science professions can contribute to gender equality.

4% of the world's population is actively involved in playing football...



... which is equal to the populations of Germany, France, UK and Italy, combined

For some, these ideas might seem like a 'Revolution'. In reality, these are merely steps in 'Evolution' – a process of inevitable, progressive change in response to a changing external environment. Michel D'Hooghe shares with us how the rapidly developing fields of biotechnology, informatics, nanotechnology and cognitive sciences are shaping the future of football medicine and science, alerting us to how quickly change can occur, but also how those who embrace change are the leaders of tomorrow.

We hope you enjoy this *Aspetar Sports Medicine Journal Targeted Topic: 'Football (R) Evolution'* and are encouraged to be an active part of the growing global football medicine and science family – using the game as a means to promote health, performance and equality.

References:

1. Kunz M. 265 million playing football. *FIFA Magazine 2007*. Available from: https://www.fifa.com/mm/document/fifafacts/bcoffsurv/emaga_9384_10704.pdf [Accessed October 2017].
2. FIFA. *History of Football – The Origins*. Available from: <http://www.fifa.com/about-fifa/who-we-are/the-game/index.html> [Accessed October 2017].

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