



## EDITORIAL

## Returning to Sport during the Covid-19 pandemic: The sports physicians' role



In January 2020, a new strain of coronavirus called SARS-CoV-2 was identified in Wuhan (China) (COVID-19)<sup>1</sup>, the World Health Organization has since declared a pandemic with an ensuing and unprecedented global healthcare, economic and social crisis<sup>2</sup>.

The world of sport has also been significantly affected on both national and international levels with the cancellation of important events such as the Tokyo Olympic Games<sup>3</sup>, the European Football Championship and the Copa America, all scheduled for Summer 2020. In addition, all of the National Leagues and Championships being closed down has resulted in the loss of billions of euros for sports like basketball and football<sup>4</sup>. This disease is affecting the entire population in different proportions and it is estimated that the average number of infected people is around 15%<sup>5</sup>.

Regarding professional athletes as the disease is relatively new, we do not have any substantial or meaningful data yet concerning the proportion or ratio of SARS-CoV-2 infection. Even though athletes are not considered in a high-risk population, in the event of being infected both their health and performance could be directly affected. Therefore, it is essential to have this information and to define solid (but allowing flexibility as new data becomes apparent) protocols in order to know if they can follow their training programs in a safe manner.

In general professional athletes are younger and have less comorbidities than the rest of the population, hence a lower risk of severe outcomes due to COVID-19, however as they are part of the general population they must follow the same prevention strategies to avoid the spread of the virus, and flatten-the-curve so healthcare systems do not collapse<sup>6</sup>. The same applies to those surrounding the athletes like coaches, physical trainers, team managers, team physicians, physical therapists, equipment managers and other people working in the club facilities that are generally older and probably have more risk factors and comorbidities, but also to their coexisting relatives.

During the entire lockdown period the sports physicians of all the club's different teams have made sure that their

players have been adequately informed and that they have followed the prevention recommendations. A strict surveillance and epidemiological control of the usual COVID-19 symptoms in both the athletes and their relatives, with special emphasis on hygiene measures and social distancing, has been carried out and when a case has been detected the same guidelines and protocols as the rest of the population have been followed<sup>7–9</sup>.

As we mentioned previously, and even though a few related articles have been published, we do not know the exact magnitude of the disease in professional athletes nor its' real consequences and impact on physical performance<sup>7,10</sup>.

Preliminary data from LaLiga, that includes professional football players in Spain, reports that approximately 16% had positive antibody rates (IgM/IgG) right after the end of the lockdown with a large variation between different teams.

In Spain, due to the current situation, different sports federations, medical associations, and societies related to sports have developed different protocols to minimize the COVID-19 impact during the return to training and prior to the return to competition. Specifically LaLiga, the highest authority, has implemented a mandatory protocol for professional teams in order to minimize the risks of infection by SARS-CoV-2 during training, taking into account all the factors that could put the staff and athletes health at risk<sup>11</sup>.

This protocol has been endorsed by the Health Ministry and Sports Council for its legal implementation.

At the time of writing this article, all of the First and Second division football teams have already started their training and are currently in a reduced group training phase.

Other protocols have been made public like the ones from the Spanish Football Federation (RFEF), the Basketball Doctors Association, the Union of European Football Association (UEFA) and the National Basketball Association (NBA).

Football Club Barcelona Medical Department, most of the authors present in this article, designed a comprehensive and in-depth protocol following the original LaLiga Guidelines, considering the club's specific circumstances to be

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even more rigorous in controlling the transmission of the SARS-CoV-2 and to ensure the optimal health condition and physical performance of its players before the return to competition.

Specifically this protocol calls for a thorough health examination or a Pre-Participation Medical Examination (PPME), similar to the one we perform in the pre-season<sup>12,13</sup>, as well as polymerase chain reaction (PCR) and the enzyme-linked immunosorbent assay (ELISA) testing, to help us detect and track positive and potentially contagious cases and to know the seroprevalence of the players<sup>14,15</sup>.

We should also broaden the assessment of the symptomatic and positive cases in order to analyze the possible impacts on other organs and systems such as the respiratory, cardiovascular, musculo-skeletal and the immune system, that could have a negative effect on the physical performance of the athletes once the physiological and metabolic demands increase or lead to a chronic condition<sup>10,16</sup>.

It is well known that viral infections can cause pericarditis or myocarditis, therefore a complete examination should be done to rule out myocardial injuries in symptomatic athletes with a positive PCR test and also in those who have overcome the infection before they resume their training in order to avoid complications<sup>17</sup>.

Finally, all protocols should consider the individual assessment of the higher risk of injuries in athletes especially after a long lockdown period<sup>18-20</sup>. These evaluations will have to be performed on a regular basis throughout the duration of the competitive season.

A few days before the closing of this editorial we all witnessed the return of the professional football championships. The first reports showed an increase in the injury rate per match before the lockdown. This is data from the first day of competition after the lockdown that should be taken into account.

This data should make us consider a gradual and controlled return to training through load monitoring, wellness type questionnaires as well as effective management of player rotation during matches, increasing the number of changes allowed, where efficiency in injury incidence needs to be analyzed.<sup>20,21</sup>

These are the main reasons why we think that sports physicians will play a major role in the "post-lockdown period", in the management of athletes' health and condition through close monitoring and daily follow-up, symptom control and detection of early signs of complications, and also specifically assessing individual risk factors regarding injuries.

Knowing the prevalence and incidence of COVID-19 during the return to training and competition will provide interesting information that will allow us to evaluate the effectiveness of the different protocols that have been followed to lower the risk of infection, and at the same time assess the immunization during the study period and make sure the players resume competition in an optimal physical condition.

We strongly believe that all the information and data that such measures in professional athletes will generate, needs to be studied and analyzed using the best scientific criteria and must be shared in a transparent and supportive way to serve as an example and guidance for all professional and recreational athletes.

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