



LETTER TO THE EDITOR

Smart decisions and return to play



Decisiones “inteligentes” y Return to Play

Dear Sir,

In 2013 and in these pages we underlined the need to examine the complex decision of when to Return to Play (RTP). This has to be while taking into account the progress of the injured sportsman or woman in the specific skills of their sport.¹ A tool was created as the result of this concern, with the aim of quantifying the question. It is able to evaluate the tactical technical readiness of an injured footballer in recovery phase.²

Due to the complex multifactorial nature of sports injuries^{3,4} we considered that it was not intelligent of us to rule out the other dimensions when determining the readiness of a footballer to return to training with relative security. Additionally, thanks to a pioneering model for this question,⁵ we knew since 2010 that medical, functional, conditional and psychological factors affecting the player could not be forgotten.

At the end of 2015 there was a lack of complete proposals that would supply a valid and proven response to this question. This multidimensional approach was therefore once again emphasised in the International Sport and Recovery Convention in Switzerland.⁶ From then on we started to find some overall decision-making proposals that we could base ourselves on, such as the one presented in our country that centres on injury to the posterior musculature of the thigh.⁷

The Safe Multidimensional Algorithm for Return to Training (SMART) is a decision-making tool that, as its name indicates, places great emphasis on the multidimensional nature of sports injuries. This algorithm, which has been put into practice during two consecutive professional football seasons (data pending publication), was designed thanks to international collaboration in which authors such as Markus Waldén, Martin Hägglund, Boris Gojanovic and Alberto Grassi took part. This established three gradual increasingly complex and demanding steps that footballers have to surpass appropriately in order to progress in their recovery. Each step takes the form of several tests, up to a total of 17,

all independently graded for levels of achievement. Pain, inflammation, instability, fat percentage, posture control and basic tactical technical skills for Step 1. Anxiety, mood state, vertical bipedal jumping, horizontal single leg jumping (once), agility and advanced tactical technical skills for Step 2. Adherence, self-perception as returning, swerving, horizontal single leg jumping (triple) and group tactical technical skills for Step 3.

Due to the time that is needed to perform all of the tests, this algorithm was only used for injuries of a severity that meant they lasted for longer than 7 days. Players performed the tests gradually in the order set by the algorithm, taking into account the periods of sick leave from sport established beforehand. The optimum outcome of all of the tests would make it possible for those caring for the injured player (doctors, physiotherapists, sports therapists and/or trainers) to do so objectively and “more surely”.

To determine the efficacy of the SMART its performance was evaluated in more than 100 sports injuries, taking into account supposedly correct decisions to return to play (without a relapse) as well as less correct ones (when they were followed by relapse). Although some measurements such as those referring to pain, agility, swerving, tactical technical skills, anxiety or self-perceived state seem to be more sensitive when discriminating between subjects who relapsed and those who did not, many questions still remain unanswered regarding the proposal presented here.

Why these tests and not others? Why are some tests performed earlier and others later? Should not the type of injury be taken into account, together with its severity when prioritising certain tests or others? Is there really enough time in a professional context to take so many measurements? These and many other questions will have to be answered soon, so we therefore take the opportunity here to invite the whole professional community to continue examining this question.

Acknowledgements

Markus Waldén, Martin Hägglund, Boris Gojanovic, Alberto Grassi, Sixto Gonzalez Víllora and Pilar Sainz de Baranda.

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Available online 21 December 2017