

Sports Cardiology Qualification

Zusatzqualifikation „Sportkardiologie“

Cardiology is increasingly interested in sport – both scientifically and in practical everyday life.

Nowadays there are many, high-quality publications on topics like, for instance, sudden cardiac death in sports, physiological adaptations and possibly damaging effects on the heart due to (high-) performance or competitive sport or – “simply” – on the athletes EKG (4). Moreover, there were numerous studies in recent years on physical exercise in the prevention of cardiovascular diseases as well as on training of patients with heart failure, CHD, ICD, atrial fibrillation or, lastly, also following transaortic valve implantation (TAVI) (3). Important conclusions on the physical performance capacity and exercise tolerance of cardiac patients can be drawn from these, as well as training recommendations for cardiovascular prevention and rehabilitation.

But a lot of what at first seems simple and banal, can in practice raise questions and cause problems in the evaluation of sports fitness. For example, there may be changes in the ECG or echocardiographic borderline ventricle and atrial dimensions and functions in athletes: Is the elevated ST-segment of the athlete who comes for consultation physiological or pathological? Do the ECG-changes and echocardiographic findings fit the type of sports, the training history and ethnoses? If the echocardiographic finding is in the grey zone, should a supplementary cardio-MRT be done to be sure – or maybe even for legal reasons? Can the radiologist or cardiologist properly interpret the MRT of a young elite athlete without the corresponding sports-cardiological knowledge? If there is doubt, should a ban on (competitive)sports be enforced?

But questions and problems can arise not only in elite and competitive sports. Providing training recommendations and their implementation in prevention or in cardiac patients is not simple and banal: what ergometry protocol should be used? Cycle or treadmill ergometry? Should the training intensities be determined by maximum heart rate, maximum oxygen uptake or better by submaximum spiroergometric thresholds or lactate thresholds? Should training be by the duration method, the interval method or even the high-intensity interval method (HIIT)? Is strength training meaningful and possible? Do you need trained sports therapists for training and how should the cardiac patient train at home? Can the patient be sent to a fitness studio, since heart-sports group training once a week is too little?

There are many sport-cardiological questions. That's why sports physicians formed the registered working group (AG) “Sports Cardiology” in the German Society of Cardiology- Heart and Circulatory Research (DGK) in 2005.

I remember very well the telephone call preceding the founding with the Director of the DGK at the time, Professor Gunther Arnold, in which I described the necessity from a sports-medical point of view for an AG „Sports Cardiology“, Since the Board of the DGK were also of the opinion that there was such a need, the new founding of the AG “Sports Cardiology” followed the earlier AGs „Sports Medicine“ (1985) and „Physical Exercise Capacity in non-coronary heart diseases“ (1995) was approved “with no dissenting votes“.

The first main meeting of the AG „Sports Cardiology“ was held in 2006 during the annual meeting of the DGK on the topic „Cardiovascular Sports Fitness Examinations“ and was so well-attended that many in the audience sat on the floor of the room that was set up for ca. 250 people, and the projector on the ceiling failed briefly twice because of the development of heat in the too-small room.

Since then, a lot has happened and the AG “Sports Cardiology” has stimulated exchange between sports doctors and cardiologists in numerous, well-attended Congress meetings. A position paper published in 2013 at the European level under the heading of “European Association for Cardiovascular Prevention and Rehabilitation“ (EACPR) of the European Society of Cardiology (ESC) for a Curriculum for the qualification “Sports Cardiology“ (1) was commented in 2016 by the AG “Sports Cardiology“ (2). Moreover, the AG recently set up a Curriculum for a qualification “Sports Cardiology” in Germany. What is special about that, is that, compared to already-existing qualifications of the DGK, the qualification “Sports Cardiology“ is a cooperation between the DGK and the German Society for Sports Medicine and Prevention e.V. (DGSP) and to be awarded the highest qualification level, the specialist title “Sports Medicine” is required in addition to the title “Specialist for Cardiology“.

After examination of the Curriculum by the Scientific Council and the Presidium of the DGSP, it has now been submitted for final examination and standardization of all additional qualifications to the DGK, but this is only a formality.

Of course, there are voices saying that Sports Medicine would cede some of its competency by the additional qualification “Sports Cardiology“. But >

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the synergistic effects are in the foreground, since the two disciplines learn from one another. And this is necessary due to the increasing complexity of the two disciplines, since the final goal is the well-being of the athletes and patients in various queries.

In order to correctly understand findings of high-performance athletes and in particular to minimize false positive findings in the diagnostic gray zone area, the cardiologist must have performed a minimum number of examinations of high-performance athletes. On the other hand, sports doctors involved in cardiology must promptly recognize pathological cardiac findings in order not to generate false negative findings in high-performance athletes with beginning cardiac pathologies. In patients with heart disease, “sports”-methodical and performance-physiological knowledge of sports medicine as well as the cardiac patterns are essential for the correct prescription of medications, if exercise therapy is to be appropriate and at the same time not expose the patient to any unnecessary danger.

A good example of successful cooperation between sports medicine and cardiology are the outpatient cardiological training, resp. rehabilitation centers in the university hospitals in Tübingen and Ulm, which are both managed by the Department of Sports Medicine. Good examples for successful cooperation between Sports Physicians and Cardiologists in high-performance sports are the Registry of Sudden Cardiac Death in Sport (SCD-Germany; www.scd-deutschland.de) and the Myocarditis-Registry for Athletes, headed by the Sports Medical Institutes in Saarbrücken resp. Tübingen.

Sports Cardiology will remain an essential pillar of German sports medicine in the future. The mutual qualification “Sports Cardiology” from the DGK and DGSP certainly leads the way, since athletes and patients will both profit from the synergistic effects. But in the scientific area as well, intensified exchange between sports physicians and cardiologists will lead to an increased number of mutual studies and publications and thus lead to clarification of many of the questions which are now still unanswered. ■

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