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The value of the research the dispersion of QT interval in the sporting teenagerAlexandru Grigore Dimitriu
*Iere Clinique de Pediatrie, Iasi, Roumanie***Objective:** to evaluate the QT interval dispersion in adolescent athletes regarding on the type of physical effort.**Methods.Subjects:** 51 sporting teenagers (14-17 years old) organized in 2 groups. First group: 25 endurance-trained athletes (runners, football-players) and the 2nd group: 26 strength-trained athletes (wrestlers, boxers). Control group: 20 teenagers in the same age group, without any sign of cardiac suffering. ECGs were assessed on all the patients, athletes and non-athletes and used to calculate QT interval in three successive cardiac ECG cycles, the QT interval dispersion (QTD) (the difference between maximum and minimum value of QT interval) and the QTc interval dispersion (QTcD)(Bazzet's formula).**Results:** the average values of QTD and QTcD in the 1st and 2nd group were superior than the values in the control group but the difference is not statistic significant.

1 st group QTD:	43.54×21.03 ms	QTcD: 50.81×19.34 ms
2 nd group QTD:	48.23×12.56 ms	QTcD: 53.59×17.21 ms
control group QTD:	35.88×10.22 ms	QTcD: 39.23×14.81 ms

The highest values of QT interval were found in strength-trained sporting teenagers. The highest values of QTD and QTcD were found in sporting teenagers from the 2nd group that it might be possible to have a higher ventricular arrhythmia risk. There wasn't any case with QT interval value longer than the normal.**Conclusions:** At side of other parameters ECG, it is useful research screening of the QT interval and QTc interval dispersion during periodic controls, like indicator of the risk of the ventricular arrhythmias at sporting teenagers

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Inquire into the behaviors and Evaluation of cardiovascular risk in the marathoniansAnass Assaidi, Hasna Faresse, Kawtar Bennis, Fatima Ezzahra Labbi, Mohamed Bennani, Marouane Allouch, Leila Azzouzi, Ahmed Bennis
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Maintenance of exercise training after a center-based cardiac rehabilitation: effects on physical capacity, psychological status and obesity indices after 12 monthsPhilippe Blanc (1), Laurent Mourot (2), Franck Rivière (1), Patrick Campo (1), Soeb Chopra (1), Sebastien Maunier (1)
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Previous studies have shown that patients exiting cardiac rehabilitation program (CRP) have difficulty maintaining an adequate exercise activity.

The aim of this prospective study was to determine the effects of a maintenance exercise program (MEP) on physical capacity, psychological status and indices of obesity after a 12 months follow-up period.

The MEP was organized by the cardiac patient association "Prenez la vie à Coeur", Reunion Island. Sessions were supervised by a sport trainer

and a professional health care and consisted in walking exercises, gymnastic and strength exercises, stretching and relaxation, total duration 2 hours.

Eighty nine patients (46 women, mean age 58.5±10.3 years) exiting an initial 6-week CRP were included in the MEP and performed a weekly exercise training session during 12 months.

All patients underwent a 6-min walk test (6MWT) before starting MEP and after 12 months. Patients also completed the Hospital Anxiety & Depression scale and a Quality of Life (QoL) questionnaire. Weights, body mass index (BMI), and waist circumference (WC) were measured before and after the exercise intervention.

After the 12 months-period there were a significant improvement in distance at the 6MWT (from 532±100 m to 573.6±92 m – p=0.001), a significant decrease in weight (from 69±12.8 kg to 67.2±12.8 kg – p=0.001), BMI (from 25.8±4.7 to 25.3±4.6 – p<0.05) and WC (from 92.3±11.5 to 90.6±11.7 – p=0.003). Improvements were observed in anxiety level (6.1±3.3 to 5.7±3.0), depression level (6.0±3.3 to 5.7±2.8) and QoL (6.1±1.5 to 6.9±1.5/energy, 6.2±1.9 to 7.0±1.6/activity, 6.4±1.6 to 6.7±1.7/quality of life), but the differences were not significant.

Conclusion: Despite the lack of control group, this study showed that a weekly maintenance exercise-training program after a center-based cardiac rehabilitation was effective in improving/maintaining physical and psychological status as well as indices of obesity.

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Cardiac remodeling in tennis players participating in veteran Roland-Garros tournamentNicolas Mansencal (1), Stéphane Perrot (1), Dany Marcadet (2), Bernard Montalvan (2), Olivier Dubourg (1)
*(1) AP-HP, Hôpital Ambroise Paré, Service de Cardiologie, Boulogne, France – (2) Fédération Française de Tennis, Paris, France***Background:** The practice of intensive tennis may lead to cardiac changes. The aim of this study was to analyze the cardiac changes due to tennis practice in veteran tennis players.**Methods:** We have systematically proposed a complete screening echocardiography to the tennis players (>35 years) participating in the 2007 and 2008 veteran Roland-Garros tournaments. The protocol was approved by the French federation of tennis. The study population consisted in 213 veteran tennis players. All subjects included in this study underwent a complete echocardiography (2D echo, M-mode, CW, PW and color Doppler, and tissue Doppler imaging). Analysis was performed according to the decade of life and to the level of tennis practice (intensive (> 10 hours/week) versus moderate training [T+ vs. T-]).**Results:** Mean age was 55.5±12.3 yo. Twenty-one patients were excluded from the analysis because of echocardiographic results (detection of 1 Marfan syndrome, 1 dilated cardiomyopathy, 2 CAD, 2 aortic stenosis and 2 significant mitral regurgitations) or previous history of hypertension. LV mass was significantly higher in subjects T+ whatever the decade of life in women and in men (p<0.005). No correlations were observed between age and LV mass. LV diameter and LV ejection fraction were not significantly different in T+ and T-, and whatever the decade of life (p=NS). Right and left atrial measurements were significantly higher in T+ (p<0.02). Diastolic function was statistically different according to the decade of life (impaired relaxation in subjects > 60 yo), as expected, but E/e' ratio was <15 in all patients).**Conclusions:** Our study supports the view that echocardiography allows to detect cardiac pathology in veteran tennis players. Practice of tennis leads to increase LV mass and right and left atrial measurements in T+ veteran tennis players. Systolic and diastolic function remains preserved whatever the decade of life and the intensity of training.