

Methods: The study population consisted in 353 subjects: 303 veteran tennis players (35 years) participating in the 2007, 2008 and 2009 veteran Roland-Garros tournaments and 50 healthy patients included in an age- and gender-matched control group. All subjects underwent a physical examination, a 12-lead electrocardiogram and a complete transthoracic echocardiography. Analysis was performed according to the decade of life, to the level of tennis training (intensive (> 10 hours/week) versus moderate training [T+ versus T-]) and to the Henry's abacus.

Results: Mean age was 55.6 ± 12.4 years (range: 35-80 years). Left ventricular and atrial parameters were significantly greater whatever the decade of life in tennis players as compared to the control group ($p < 0.001$), and in subjects T+ as compared to subjects T- and to the control group ($p < 0.005$). Fifty-one male tennis players (40%) and 29 female tennis players (19%) presented with LV hypertrophy. Patterns of mitral inflow and pulmonary vein inflow were significantly different according to the decade of life ($p < 0.0001$), but no difference was observed between subjects T+, T- and control group. Echocardiographic parameters remained in physiological ranges whatever the decade of life and the intensity of training (Figure: in red for T+ and in yellow for T-). Grey and black lines represent the lowest and highest normal values according to the decade of life).

Conclusions: Long-term practice of tennis leads to cardiac remodeling. However, cardiac chamber size, systolic and diastolic function remains in physiological ranges whatever the decade of life and the intensity of training, suggesting that cardiac remodeling in veterans remains a physiological adaptation.

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Changes of cardiac function during ultra distance and trail running

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Background: Previous studies have suggested that marathon may induce reversible cardiac dysfunction. However, no previous study has assessed cardiac function during ultra distance and trail running. The aim of this study was to assess systolic and diastolic function during ultra distance and trail running.

Methods: We studied 28 subjects (amateur runners) participating in the 2010 Ecotrail (80 kilometers). All subjects underwent several echocardiographic examinations: before, during the race (Km 21 and Km 50) and at the end of the race. We systematically recorded 2D parasternal long axis and apical 4, 3 and 2 chamber views, allowing to measure conventional LV parameters and longitudinal strain. We also recorded PW mitral inflow and Doppler

tissue imaging of the mitral annulus (lateral and septal). All measurements were anonymously performed.

Results: Mean age was 43 ± 9 years. Twenty-one subjects (75%) finished the race. Left ventricular ejection fraction was significantly depressed at the end of the trail ($64 \pm 4\%$ versus $70 \pm 3\%$ before, $p < 0.0001$), but not at Km 21 and 50. At Km 50, 2D longitudinal strain was significantly reduced as compared to longitudinal strain observed at baseline ($-19.4 \pm 3\%$ versus $-22.1 \pm 2.1\%$ before, $p = 0.0008$). Significant changes in transmitral velocities were observed after 21 Km, earlier than the abnormalities observed for the systolic function (E/A ratio: 1.6 ± 0.7 before versus 1 ± 0.4 at Km 21, $p = 0.0004$).

Conclusion: Our study suggests that ultra distance and trail running leads to abnormalities of systolic and diastolic function in amateur runners. Diastolic dysfunction arises earlier than systolic dysfunction. Assessment of longitudinal strain allows to detect early systolic dysfunction.

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Impact of age on clinical periodontal parameters in patients with acute myocardial infarction

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Aim: To evaluate the periodontal status in patients with acute myocardial infarction (AMI) and to determine whether there was a specific profile according to age.

Methods: A total of 197 consecutive patients with AMI were included and the oral examination included the number of teeth, endodontically treated teeth, periodontal screening index (PSI), clinical attachment level, and radiographic apical lesions (radiography examination). Patients were classified according to tertiles of age.

Results: The table below summarizes the specific profile according to age. The study demonstrated that patients with AMI exhibited an unfavourable dental state of health. No relationship was found between C-reactive protein levels and periodontitis.

Conclusion: This work demonstrates specific profiles of dental status according to age. In younger patients, the dental status was poor, and although no relationship with CRP was shown, further studies are needed to include a more specific assessment of coronary lesions and their evolution in this context of poor dental health.

(Voir tableau ci-dessous)

	Tertile 1	Tertile 2	Tertile 3	p
N	66	66	65	
Mean age, y	47.7 ± 0.4	59.5 ± 0.3	72.5 ± 0.4	<0.001
Men	83 %	89 %	75 %	0.104
CRP > 3 mg/L,	52 %	41 %	54 %	0.205
Current smoker	72 %	63 %	47 %	0.017
Periodontal status				
Presence of caries	50 %	28 %	45 %	0.037
Presence of Inflammation	64 %	71 %	67 %	0.731
Teeth lost	8 ± 8	10 ± 8	15 ± 8	0.019
Alteration of chewing	24 %	34 %	67 %	<0.001
Bone Loss	55 %	71 %	86 %	0.001