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LETTER TO THE EDITOR

Letter in response to the article entitled "Incidence of major adverse cardiac events in men wishing to continue competitive sport following percutaneous coronary intervention" by Guy et al.



Lettre en reponse à l'article, « Incidence of major adverse cardiac events in men wishing to continue competitive sport following percutaneous coronary intervention » by Guy et al.

Keywords Sport; Coronary artery disease; Stent thrombosis; Stent restenosis

Mots clés Sport ; Maladie coronarienne ; Thrombose de stent ; Resténose de stent

To the Editor,

I would like to congratulate Guy et al. for their very interesting study [1], in which they retrospectively evaluated the incidence of major adverse cardiac events in men with coronary artery disease who practised intensive physical activity after a stenting procedure.

Indeed, 2015 guidelines from the American Heart Association/American College of Cardiology [2] authorize intensive physical activity and/or competitive sport in these patients, at least 3 months after a coronary revascularization procedure, provided that they are asymptomatic, have good control of vascular risk factors and present with left ventricular ejection fraction $\geq 50\%$, no residual stenosis and no inducible ischaemia or arrhythmias.

In order to support these recommendations, Guy et al. included 108 men after percutaneous coronary intervention: 29 participated in moderate leisure-time sport (under the ventilator threshold, more than 4 hours per week); 58 participated in intensive leisure sport (above the ventilator threshold, more than 4 hours per week); and 21 participated in competitive sport.

Thus, I believe that the body of the article does not exactly support its title: the patients included in the study were not men wishing to continue competitive sport following percutaneous coronary intervention (this accounted for only 21/108 [19%] of the patients), but were mostly men wishing to continue to practise intensive physical activity.

This is not a detail; competition offers an additional level of stress [3], and could be therefore more dangerous.

As underlined by the authors, stent thrombosis is the most feared complication after stent implantation. During a follow-up of roughly 5 years (57 months on average), stent thrombosis occurred in 1/87 (1.15%) of the patients practising non-competitive sport—a very reassuring figure. However, stent thrombosis occurred in 3/21 (14.2%) of the patients practising competitive sport—a worrisome figure.

Thus, in my opinion, contrary to the conclusion of the authors, their data do not "support the Task Force 8 exercise eligibility recommendations in patients with coronary artery disease with no inducible ischemia, no electrical instability, a normal left ventricular ejection fraction and a good control of their cardiovascular risk factors who wish to partake in intensive competitive sport"; indeed, a 14.2% stent thrombosis risk at 5 years is much higher than what is expected (annual rate of 0.57% for all stents, according to the authors).

In conclusion, whereas these results are in keeping with the guidelines from the American Heart Association/American College of Cardiology regarding patients wishing to practise intensive sport, they raise an important question regarding the authorization of competitive sport.

Finally, I understand that finding patients with coronary artery disease who wish to continue competitive sport is difficult. I would like to highlight the fact that one strength of this study was to separate patients into three groups according to their physical activity status. I hope that the investigators will continue to work on this topic.

Disclosure of interest

The author declares that he has no competing interest.

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