Whatever the mechanism, I can suggest some things which may help to overcome this high percentage of unilateral total obstruction or highly decreased flow pattern (67%). My two suggestions are, firstly, that I found it useful to harvest the IMA 1 cm proximal and distal to the site of implantation of the Nuss bar, passing the bar between the sternum and the harvested piece of the IMA in view of the uncertainty about the future clinical impact of this IMA and iatrogenic obstruction. Thoracoscopic IMA harvesting from a single side is safe and reproducible and satisfactory length of both arteries can be obtained [2]. Secondly, it may be that a retrospective study of the cases who had Nuss repair could help to determine whether those patients had more significant myocardial ischaemic events or not.

Conflict of interest: none declared.

References

eComment. Nuss pectus excavatum repair: a hurdle for the treatment of coronary disease

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We read with great interest the comments by Sameh I Sersar [1] on the recent article from Külcü and colleagues [2]. In 2013, Yüksel and colleagues reported a prospective study of the internal thoracic artery (ITA) blood flow after placement of a Nuss bar for the treatment of pectus excavatum, and clearly demonstrated that the blood flow of these arteries was affected in 44% of patients in the postoperative period [3]. However, the future of these anomalies was unknown. Külcü and colleagues reporting partial or total obstruction of the ITA in 67% of their patients after Nuss bar removal, provide a preliminary answer to the question [2]. These findings raise concern, since ITAs are widely used for coronary bypass grafting. Therefore, with a view to protect the ITA from compression/interruption for future potential use, Sersar suggests performing mobilization under thoracoscopic guidance at the level of the site of implantation of the Nuss bar and passing the bar between the undersurface of the thoracic wall and the mobilized ITA segment [1]. In fact, such Nuss bar placement might lead to adhesions to the surrounding structures, and consecutive ITA lesions at the time of the bar removal. These adhesions have already been described as the cause of severe or lethal cardiac haemorrhages [4]. Finally, we consider that the best prevention of such outcomes is correcting pectus excavatum by means of a less invasive simplified Ravitch-type technique [5].

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References