Complex pectus excavatum in adults: which is the best solution?

Guglielmo Mario Actis Datoa, Alessio Maiellob, Giacomo Ravenni,* and Riccardo Casabona*

a Division of Cardiac Surgery, Mauriziano Umberto I Hospital, Turin, Italy
b Division of Orthopaedic Surgery, Mauriziano Umberto I Hospital, Turin, Italy

* Corresponding author. Cardiac Surgery Unit, Umberto I Hospital, Corso Turati 62, 10128 Turin, Italy. Tel: +39-011-5082162; fax: +39-011-5082068; e-mail: giacomoravenni@gmail.com (G. Ravenni).

Received 6 December 2012; accepted 27 December 2012

Keywords: Chest wall deformity • Nuss • Pectus excavatum

We read with great interest the paper of Puma et al. [1], in which they propose an external longitudinal titanium support after sternochondroplasty for severe asymmetric pectus excavatum repair.

Pectus excavatum has probably been the chest deformity with the largest number of proposed techniques for its correction over the years.

The very interesting solution proposed by Dr Puma gives rise to a few considerations:

(i) We agree with the concept that an open procedure in severe asymmetric pectus excavatum should be preferred over minimally invasive techniques, also in the case of young patients. A careful selection in this particular class of patients is mandatory in order to evaluate the complexity of chest-rib-spine deformity and bone apposition in sternochondral ribs. The execution of a Nuss procedure in these cases may produce an immediate result that is less satisfactory due to the unbalanced tension in the most depressed chest wall portions.

(ii) We completely agree on the need of wedge and linear anterior osteotomy by preserving rib integrity in order to avoid an ‘ad axim’ displacement that could lead to sternal splitting and chest instability.

(iii) The risks of steel-strut removal as mentioned by the authors mostly arise from technical mistakes such as inadequate straightening of the bar before its extraction. We generally adopt an easy and safe way to straighten the bar and have never had complications [2].

(iv) Foreign-material removal, even if it is titanium, in our opinion, is always preferable to prevent intolerance or infections during the follow-up.

(v) We have some doubt concerning procedure-related costs. The necessity of two titanium bars and several screws seems to entail more expenses than a single steel bar.

In our experience, even in the presence of a severe deformity of the chest associated with other malformations such as a severe scoliosis, a modified Ravitch procedure with implantation of a seagull wing moulded prosthesis can be safely performed with good immediate and long-term results [3].

REFERENCES

