

we will probably have to base our clinical decisions on the results of such retrospective studies.

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An alternative idea to an alternative technique

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We read with interest the article by Federici *et al.* [1]. Scimitar syndrome is a rare congenital heart disease characterized by a wide spectrum of lesions linked to the anomalous right pulmonary venous drainage and to the degree of the right lung hypoplasia. A multicentric study done in Italy has reported on 27 patients over a 10-year span in less than 10 paediatric cardiology centres [2]. These data mean a very small individual surgical experience, and overall results are non conclusive ‘... large enough for drawing any statistical conclusion ...’, as these authors eventually stated [1].

As a matter of fact, both surgical techniques and planning of extracorporeal circulation strategies have been quite different as they strongly stimulate medical imagination. To allow a precise evaluation of this alternative approach, we need more details.

Connecting the inferior vena cava (IVC) drainage to a vacuum (-60 mmHg)-assisted reservoir is a good idea. This choice allows the use of a small-sized cannula (20Fr in this report). As reported in the US patent by Cambron *et al.* [3], the usual negative pressure employed is -5/-35 mmHg. This is also greater than the one employed in a more recent report [4]. The amount of blood cell trauma could be significant because of strong suction and it is then mandatory to report the values of blood laboratory screen tests for haemolysis [5]. The prolonged and heavy contact between blood and air is another concern.

An alternative idea to the aforementioned problem is to place a long venous cannula (such as one for port access cardiac surgery) positioned via the right femoral vein into the IVC, just at the level of the right cavoiliac junction. In such a way, the main blood drainage from the IVC is directed towards this cannula. A small pump sucker is usually good enough to get a clear operative field during the proper placement of stitches inside the IVC, provided it does not suck too deeply into the abdomen.

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Reply to Gaeta and Famà

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We thank Gaeta and Famà [1] for their valuable comments on our article entitled ‘An alternative cardiopulmonary bypass strategy for intracaval baffle repair of scimitar syndrome’ [2].

Our routine protocol for surgical procedures performed with vacuum-assisted drainage is to apply a negative pressure not higher than -40 mmHg to avoid haemolysis linked to shear stress phenomenon. In the case we described in our article, we experimented with a new system consisting of a kinetic-assisted drainage for superior venous return placed in series with a separate vacuum-assisted drainage for the inferior vena cava, applying a negative pressure of -60 mmHg to the latter. In this way, we could use a very small cannula (20Fr) managing the copious inferior venous return very effectively. The meaning of separating the upper and lower venous return is to manage the massive air intake coming from the inferior cannula without snare control avoiding the risk of air lock. We know that ‘-60 mmHg’ is higher than the recommended maximum value for vacuum-assisted drainage, and in the future, we probably could get the same system effectiveness using negative pressures not higher than -40 mmHg. Anyway, our patient underwent intracaval baffle repair of scimitar syndrome under full-flow normothermic cardiopulmonary bypass without the need for blood transfusion and maintained a final post-bypass haematocrit of 31%. We did not observe haematuria or other clinical