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EDITORIAL COMMENT

CONGENITAL

The axillary incision to repair congenital heart defects

René Prêtre*

Department of Cardiothoracic Surgery, Zurich University Hospital, Zurich, Switzerland

* Corresponding author. Department of Cardiothoracic Surgery, Zurich University Hospital, Rämistrasse 100, CH-8091 Zurich, Switzerland. Tel: +41-44-2668001; fax: +41-44-2668021; e-mail: rene.pretre@kispi.uzh.ch (R. Prêtre).

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The axillary area presents interesting characteristics. The skin is extremely mobile and stretchable, the thoracic wall is practically muscle free, it is away from the breast gland and an adducted arm hides it. These factors, because of their cosmetic potential, undoubtedly make this area attractive for a surgical access to the heart.

Yan *et al*. [1] have used this route not only to close the classical secundum type of atrial septal defects, but also, like us [2], to repair more complex defects such as partial atrioventricular canals, perimembranous ventricular septal defects (VSDs) and partial abnormal pulmonary venous returns. We also use a mirror incision on the left side to implant epicardial pacemaker electrodes on the left atrial appendage and on the left ventricle [3].

Even if the results, as reported in the present study, are similar to those obtained by a conventional sternotomy, one has to concede that the exposure makes the repair more difficult and the manipulation of the surgical instruments more demanding. We commonly stratify the difficulty of a cardiac operation within a scale of five or six classes [4]. This approach sets any operation in a higher level of difficulty, usually by an increment of one class—if not two classes. Not surprisingly, in Yan's paper, the procedure was performed exclusively by experienced surgeons and not by trainees.

Obviously, our primary concern is aimed at the benefit of our patients. To provide a cosmetically superior incision with the same quality of cardiac repair is indisputably a step forward [5]. This enthusiastic view must, however, be tempered. First, the deliberate increase of the difficulty of any operation, even if this degree remains low in good hands, will fatally result in an excess—probably considered as anecdotal, but still an excess—of residual defects or complications. This part of the problem will never be fully appreciated by our scientific analysis, even with the use of large meta-analyses of literature reports, because a negative outcome in what is considered a trivial operation is unlikely to ever be reported. Secondly, what can be good for our patients can be bad for our residents and our education programmes. The training of a cardiac surgeon requires the performance of operations with progressive degrees of difficulties. The amputation from their curriculum of the easiest operations (either graded in a higher category or performed by senior members) will confront junior surgeons directly with technically challenging operations, and will possibly result in an increased morbidity—but in another group of patients. This seems similar to sending an apprentice diver for an acrobatic dive directly up the 5- or 10-m platform when he has hardly had a chance to try it out on the 1- or 3-m springboard. The intensity of the splash created by the entry to the water (for us, the surgical stress and morbidity inflicted on the patient) is prone to be markedly high for many dives until the technique is eventually mastered. Thirdly, the temptation to accept compromises in order to force the approach is difficult to resist. The two challenges of our surgery have always been the permanent control of the circulation and the repair of the heart. Controlling both of them through a 5-cm incision is an acrobatic undertaking. Every cannula, tourniquet or clamp participates in the cluttering of the operative field and the temptation becomes great to use smaller ones or to get rid of one of them simply to disengorge the place. Likewise, the temptation to provide only a partial repair of the defect is rampant, and the fact that a concomitant leaking aortic valve in subaortic VSDs was never directly tackled in Yan's series bothers us. We are proponents of a minimally invasive approach to repair simple cardiac defects and we are even proponents of the axillary incision [6], but with two conditions: the security of the circulation should never be compromised and the cosmetics of the repair should primarily be visible on the heart.

Conflict of interest: none declared.

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