experience, I made contact with Professor Jim Cox in 2012. After he emphasized the key aspects for successful completion of the Cox maze III ‘cut-and-sew’ procedure, I started to perform it by adding the transection of the SVC. This modification from the original technique can be termed as mini-partial heart autotransplantation. And this is just the point that I want to emphasize in this comment. Once the entire LA has been circumferentially divided and the SVC sectioned, the heart is lifted up and twisted towards the left side of the patient. I have found that this technique allows an extraordinary visualization of the mitral valve. Since the heart is twisted, the surgeon works from ‘ground level’. I have performed 14 cases of the Cox maze III procedure and mitral valve surgery by means of mini-partial heart autotransplantation with an excellent outcome. Re-anastomosis of the SVC is performed in 5 to 10 minutes in a beating heart. No additional risks are added with this technique. I encourage cardiac surgeons to use this technique to make both mitral valve surgery and the Cox-maze III procedure more amenable.

Conflict of interest: none declared

References


eComment: Partial cardiac autotransplantation with a concomitant mitral valve, aortic valve replacement and tricuspid plasty

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We read the paper of Pan et al. [1] with great interest. We agree that cardiac autotransplantation is a good approach for reduction of redundant tissue in giant left atrium (GLA). Nevertheless we believe that total cardiac autotransplantation can be technically more suitable than partial. It provides better exposure both for the left atrium (LA) and the cardiac valves, and the latter can be corrected in situ before cardiac reimplantation. According to our experience, this technique can provide a good long-term result even if LA volume is more than 2 l. A patient in whom we undertook surgery seven years ago [2] is still alive and in a satisfactory condition. In our case we excluded incisions on the right atrium which turned out to be thin and fragile. As for the LA, we thought it was possible to perform LA reduction by reefing the LA posterior wall and pulmonary veins, which had been previously carefully mobilized. Cardiac autotransplantation is technically identical to cardiac transplantation using a bicalve technique, and our experience with the latter procedure (more than 30 cardiac transplantations annually) suggested a total technique of cardiac autotransplantation. We also had a curious case of GLA in a patient who underwent cardiac transplantation with rheumatic heart disease. Twenty-three years ago, prior to the transplant procedure, he underwent mitral valve replacement with a disk graft EMIKS 27 (produced in the USSR) [3]. Preoperative echocardiography showed GLA and its calculated volume of 350 ml. After excision of the right atrium, right ventricle and LA, the LA presented a particularly difficult situation. The residual posterior wall of the LA was considerably enlarged to 18 x 16 cm, calcified pulmonary veins were immovable and fixed to surrounding tissues. We exposed the pulmonary veins widely from the surrounding tissues and with two monofilaments (Prolene 4-0) on felt pads (4 x 7 mm) we approximated the ostia of the pulmonary veins laterally along the posterior wall with gathering sutures. Each horizontal suture was located between the upper and lower pulmonary veins. This was supplemented with sutures (Prolene 4-0) on felt pads introduced vertically. Using stitches only on the posterior wall of the LA, we implanted the LA of the donor heart. Posterior wall reduction and donor LA implantation was performed in 57 min. Therefore, using our approach, we can avoid dissection of the posterior wall of the LA, especially in patients with previous surgery and a huge LA, where the surgeon always finds thin tissue. We do not believe that the residual surface will lead to thromboemboli in patients on life-long anticoagulant medication.

Conflict of interest: none declared

References