compared to a mechanical prosthesis [3] and, therefore, bioprostheses and PPM could be suggested to be closely linked. However, one cannot rule out that PPM could be considered a ‘catalyst’ variable for other risk factors and, as such, even multivariate analysis may have difficulties in discriminating between patient-related and prosthesis-size confounding factors. In terms of the beneficial impact on outcome with the use of stentless valves, results are disparate, and no clear clinical advantage of one valve type over another has been demonstrated. In a meta-analysis, Kunadian et al. [4] concluded that stentless aortic valves provide an improved level of left ventricular mass regress (LVMR), reduced gradients and improved effective orifice areas (EOAs), but longer cardiopulmonary bypass time is required. In contrast, in a recent publication by Cohen et al., long-term outcomes of patients randomised in a previous study were evaluated [5] and the authors reported that stentless valves offered improved haemodynamic outcome, but not superior LVMR or improved clinical outcome up to 12 years after implantation.

In light of current and similar reports, in assessing the benefits of a particular valve design, the goal should be a comparison of clinical outcomes, such as survival, freedom from valve-related morbidity and functional capacity rather than EOAs, gradients, and PPM since the latter seem to be of inferior clinical importance.

References


Letter to the Editor

What else could be done beside aortic repair?

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Received 11 February 2010; accepted 28 March 2010; Available online 18 May 2010

Keywords: Aortic valve; Aortic valve regurgitation; Aortic dilatation

Congratulations to the authors for this valuable study [1]. We wanted to emphasise some issues that we think are important: Was it not necessary to correct the bicuspid aorta when aortotomy was already made? This is because the bicuspid aorta has its own unique anatomy and physiology causing turbulent flow.

Another issue was that the prolapsus of aortic leaflet that caused deterioration in the leaflet microscopy. Was another option possible to correct it other than plication?

Could it be more convenient to increase the durability of normal tissues during the repair? For example, dilation of ascending aorta may be caused by increased stroke volume due to aortic regurgitation. The peak value of rate of rise of left ventricular pressure (dp/dt) is reached around the non-coronary cusp, possibly to lead to aortic dissection. Could a graft be interposed to the ascending aorta while the patient is already being operated and, if so, could this be a preventive measure in an ageing population with prolonged life expectancies?

Reference


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doi:10.1016/j.ejcts.2010.03.058

Reply to the Letter to the Editor

Reply to Kestelli et al.

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Received 25 March 2010; accepted 28 March 2010; Available online 18 May 2010

Keywords: Aortic valve; Aortic regurgitation; Aortic valve reconstruction; Aortic dilatation

We appreciate the comments of Kestelli et al. [1] to our publication ‘Aortic valve repair leads to a low incidence of valve-related complications’. 

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doi:10.1016/j.ejcts.2010.03.047
It is correct that the bicuspid aortic valve is associated with aortic dilatation in a relevant proportion of individuals. It appears overly simplistic to relate the aortopathy to flow turbulence; genetic factors seem to play a more dominant role [2].

We do agree that aortic dilatation, if present, requires correction, as we have previously pointed out [3]. It seems very hypothetical that a very liberal use of vascular grafts results in improved event-free survival. This will have to be carefully studied first, weighing risks and benefits.

Plication of prolapsing cusps is only one of several possible techniques [4]. On the other hand, we have found it to be simple, reproducible and durable [5].

In summary, we appreciate interest and comments in this new and growing area of cardiac surgery.

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doi:10.1016/j.ejcts.2010.03.059

Letter to the Editor

Could pulmonary postoperative physiotherapy really change postoperative morbidity?

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Received 4 March 2010; accepted 19 March 2010; Available online 6 May 2010

Keywords: Non-small-cell lung cancer; Pulmonary rehabilitation; Surgery

We have read with great interest the article by Reeves et al. [1] that reported the preliminary results of a randomised single-blind clinical trial on the role of immediate post-operative physiotherapy following pulmonary resection, focussing on surgical complications. The physiotherapy intervention analysed in the reported trial refers to a treatment that had a duration equal to that of the hospitalisation, with a mean of 5 days. We see the usefulness of these data; however, we were surprised not to find any reference regarding extended pulmonary rehabilitation protocols. Several recent experiences [2,3], including our own [4], in fact, have demonstrated in pilot studies that a comprehensive protocol of postoperative pulmonary rehabilitation in non-small-cell lung cancer (NSCLC) patients is indeed beneficial in terms of improvement of functionality, exercise tolerance and, therefore, quality of life (QoL). These ‘full rehabilitation protocols’ have in common a multidisciplinary approach involving daily supervised physical sessions (incremental exercise at the cyclo-ergometer and/or treadmill, abdominal muscle activities, inspiratory resistive sessions, upper and lower extremities training and full arm circling) and educational sessions focussed on pulmonary physiopathology, pharmacology of patients’ medications, dietary counselling, relaxation and stress management techniques, energy conservation principles and breathing retraining and normally extend for 28 days (to 14 weeks where there is a mixed in/outpatient strategy). The physiotherapy approach reported in Reeves et al. [1] is represented by the nursing of the surgical patient in the immediate in-hospital postoperative stay (early mobilisation and ambulation, breathing and coughing exercises, progressive shoulder and rib cage exercises), which is normally adopted in most thoracic surgery centres with the purpose of impacting the mucus retention, the impairment of rib cage mechanics and consequent reduction of pulmonary mobilisation and the hyper-coagulative status, all factors underlying the most-feared postoperative complications: pneumonia and pulmonary embolism. This is now standard clinical practice and supportive data from randomised clinical trials (RCTs) [1] are very welcome even if non-conclusive regarding the real impact of the treatment on the early postoperative complications. However, the cited pilot studies have clearly demonstrated the benefits of structured (and extended) inpatients rehabilitative protocols with detailed analysis of significant cardiopulmonary fitness and QoL indicators so as to prompt the need of confirmatory RCTS [5] which are underway. We would invite Reeves et al. to comment on the possible synergy represented by early physiotherapy approaches along with extended postoperative pulmonary rehabilitation protocols in NSCLC patients and if any modification of the early postoperative physiotherapy approach is to be recommended in the light of their results (substantial no impact on the postoperative complications rate).

References