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Letter to the Editor / Editöre Mektup

Aortic wrapping: Safe, but really curative?

Aortik wrapping: Güvenli ama gerçekten tedavi edici mi?

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I have read the article by Kaya et al.[1] with great interest. Kaya et al.[1] are to be congratulated on successful conservative treatment of moderately dilated ascending aorta. However, I have some concerns about this conservative procedure.

Unfortunately, I'm not confident with the statement that "…. in patients with moderate dilatation of the aorta who do not require replacement of the ascending aorta", since the mean preoperative aortic diameter was reported as 44.3±3.7 (range, 38 to 50) mm. As we very well know from the recent guidelines of aortic surgery and valvular heart diseases, it has been stated that "When surgery is primarily indicated for the aortic valve, replacement of the aortic root or tubular ascending aorta should be considered, when ≥45 mm, particularly in the presence of a bicuspid valve" (Class IIa recommendation, Level of Evidence C).[2,3] Furthermore, this is not only for aortic valve and root operation, but also for all patients undergoing cardiac surgery other than for aortic indications (Class I recommendation, Level of Evidence B).[4]

In addition, the surgeon should decide rather replacing or not the ascending aorta, while considering age, body surface area, etiology of the valvular disease, presence of a bicuspid aortic valve, and intraoperative shape and thickness of the ascending aorta. I really wonder that how many patients were above 45 mm (ascending aorta not aortic root) and how many patients had bicuspid aortic valve disease, and why they did not prefer replacing the ascending aorta in these particular patients.

Although the authors mentioned that they did not perform the wrapping procedure in patients with an aortic root diameter of more than 45 mm, I strongly recommend performing supracoronary graft interposition also for an ascending aorta diameter of more than 45 mm with concomitant surgical procedures.

In spite of the fact that wrapping procedure can be performed safely, the replacement of ascending aorta is also as safe as wrapping without prolonging cross-clamp time in experienced hands. In addition, concomitant aortoplasty (above half of the patients in the study) also carries risk of prolonged cross-clamp time and increasing blood and blood product utilization even when performed with a necessity for aortotomy.

One more last concern is that the follow-up period is considerably short (median 3.8 years) to conclude definitive statement that this procedure would be safe for the long-term follow-up. Since the aortic dilatation may take years, long-term follow-up of these patients is necessary.

Finally, authors' opinion about these concerns would be very valuable for the readers.

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Author Reply

Dear Editor,

We would like to thank the author for their extremely valuable comments and criticisms.

Treatment of the cases of moderately dilated ascending aorta (AA) still remains a matter of controversy. Although it is often accepted that, in large aneurysms, replacement with excision and vascular prosthesis is the treatment of choice, the standard for treating a moderate aortic dilatation (40 to 55 mm) is still unclear. In general, guidelines recommend against the reduction of the AA diameter through wrapping, although this technique is considered an alternative, when the use of cardiopulmonary bypass is not feasible or recommended due to associated risks.[1,2]

Patients with Marfan syndrome or other known genetic connective tissue disorders, with focal areas of thinning, dissection, patients with aortic root diameters of more than 45 mm and patients with an Ergin score above 1.5/1.65 were excluded from our study. We used AA replacement in these patients. Aortic ratio (measured diameter/predicted diameter) was considered to be an indication for wrapping which is <1.5 for the age under 40 and <1.65 (surgeons experience +0.15) for the age over 40 (Ergin score).[3]

Of the patients included in the study, 39 (72.2%) had an AA diameter of below 45 mm (AA not aortic root) and 15 patients (27.8%) had an AA ranging between 45 and 55 mm. Patients with an aortic diameter greater than 45 mm were free from genetically connective tissue disorders with a high rate of comorbidities in whom the aortic ratio was below 1.65 and body surface area greater than 2 m^2. Of 28 patients who underwent aortic valve replacement, only three (10.7%) were diagnosed with bicuspid aorta and the aortic diameter was <45 mm (aortic ratio <1.5) in these patients. In addition, wrapping was applied together with aortoplasty in these patients.

In conclusion, wrapping is a simple procedure which can be easily applied in selected patients. However, future studies reporting long-term results in larger series would yield more satisfactory results about this procedure.

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