

cases with this procedure, we wonder whether the results have always been good.

Although we have some points to be clarified, we again congratulate Fukuda and associates<sup>1</sup> on their successful results in this complicated case. In our opinion, transapical aortic cannulation should be the last alternative. No one can predict the results of this procedure.

Yasushi Terada, MD

Katsutoshi Nakamura, MD

Department of Cardiovascular Surgery

Yamato Tokushukai Hospital

Kanagawa, Japan

## Reference

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## Reply to the Editor:

We thank Terada and Nakamura for their comments regarding our work.<sup>1</sup> Transapical aortic cannulation was originally described in the 1970s. However, it has been unpopular because of similar comments by the critics.

Originally this method was used in surgery for congenital heart disease or mitral valvular disease.<sup>2</sup> The main reason for the use of transapical aortic cannulation today is for surgery on diseased aorta without intracardiac abnormality. Thus the indication for this method today is different from that during the 1970s.

We have used transapical aortic cannulation in 4 patients (2 in median sternotomy and 2 in left thoracotomy) without any serious adverse effects. Although the volume of our experience is small, we would like to comment on it. With respect to hypotension during elevation of the apex, its duration was quite short, and the blood pressure recovered as soon as the apex was lowered into normal position. Although elevation of the apex of a beating heart can be an uncomfortable procedure for a cardiac surgeon, we were accustomed to this procedure from our recent experience with off-pump coronary artery bypass grafting.

In addition, hypotension during insertion of the cannula was advantageous to reduce the amount of bleeding during puncture of the apex. To prevent devastating hemorrhage during cannulation and to avoid dislocation of the cannula, purse-string suture with Dacron polyester felt was placed at the apex and

preliminary venous cannulation was performed. In 2 patients the femoral artery was cannulated as an accessory perfusion site to the lower extremities. We evaluated aortic regurgitation during aortic perfusion, and it was mild on duplex scanning. Intraoperative findings revealed a competent aortic valve with aortic cannula positioning at the center of the aortic orifice. Although clamping of the ascending aorta was impossible, all 4 patients underwent replacement of the aortic arch under deep hypothermic circulatory arrest either with or without selective cerebral perfusion, depending on the needs of each case.

Administration of cardioplegic solution was thus performed after the aorta was transected under deep hypothermic arrest. Therefore inability to administer cardioplegic solution was not an essential problem. Repair of the apex was completed during cardiac arrest, and systemic perfusion was resumed through cannula in the graft.

We concur with Terada and Nakamura regarding the usefulness of the axillary artery as the first alternative access to the femoral artery.<sup>3</sup> We used axillary artery cannulation in 23 of 935 patients who underwent cardiac surgery with cardiopulmonary bypass. In the 4 patients who underwent transapical cannulation, both the femoral artery and axillary artery were inaccessible or inadequate as a systemic perfusion site because of compressed true lumen of the descending aorta, severe obesity, or subclavian artery disease. If a patient has these conditions, transapical aortic cannulation is indicated. We believe that transapical aortic cannulation is safe and useful for such selected patients.

Ikuo Fukuda, MD<sup>a</sup>

Kozo Fukui, MD<sup>a</sup>

Ko Watanabe, MD<sup>b</sup>

Motoo Osaka, MD<sup>b</sup>

Department of Surgery 1

Hirosaki University School of Medicine

5 Zaifu-cho

Hirosaki, Aomori, 036-8562, Japan<sup>a</sup>

Department of Cardiovascular Surgery

Tsukuba Medical Center

Tsukuba, Japan<sup>b</sup>

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## Thymectomy in ocular myasthenia gravis

### To the Editor:

We read with interest the recent article by Roberts and associates<sup>1</sup> on thymectomy in the treatment of ocular myasthenia gravis (OMG). It represents an important step in the debate concerning this issue and in the consideration of OMG as part of a broad-spectrum disease and not as a distinct disease.

What we know from the literature is that the disease will progress in about 50% of patients with initial OMG.<sup>2</sup> On the other hand, thymectomy is considered a mainstay therapy for generalized myasthenia gravis (GMG), and the best outcome is expected in patients operated on early after the onset of the disease.

What we should simply do is predict when a pure OMG is an initial GMG and offer to such patients the best treatment, which might also include an extended thymectomy.

Apart from the presence of a thymoma, which makes the surgical procedure mandatory, no clear indication for thymectomy in OMG appears in the literature.

Only a few studies have focused on thymectomy in OMG,<sup>1,3-5</sup> and when patients with OMG are merged with those with GMG, the assessment of the efficacy of thymectomy is difficult for the combined action of various medical therapies and for the lack of standardized methods for assessing patient status before and after surgical intervention and assessing the correct criteria of success.

A contribution to the discussion about this topic might be derived from our experience.

From 1993 to now, 29 patients with OMG underwent transternal extended thymectomy at our institution. In the same period, the same neurologist (R.R.) treated 343 patients with OMG, and consequently, the eligibility rate for surgical treatment of OMG was 8.5%.