Letter to the Editor

Open versus thoracoscopic thymectomy for non-neoplastic myasthenic patients: is there a space for a third way?

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Received 10 August 2009; accepted 4 September 2009; Available online 26 November 2009

Keywords: Thymectomy; Myasthenia gravis; Minimally invasive surgery

We have read with great interest the article by Lin and colleagues [1] reporting on the outcome of the comparison between minimally invasive video-assisted and open-extended trans-sternal approaches for thymectomy in patients affected by myasthenia gravis (MG).

The discussion regarding the optimal surgical approach for thymectomy in MG is an ongoing widely debated issue. Substantially, the lack of a univocal and validated parameter to challenge the appropriateness of any given approach is based on the fact that the long-term remission remains somewhat not directly, consistently and coherently connected with the extension of the resection performed during thymectomy [2]. Nevertheless, a commonly shared opinion remains that the thymus along with any possible extra-thymic localization of thymic tissue should be removed at the time of operation and this belief gives strength to the assessment of any given approach, which is commonly based on the overall amount of thymic tissue and mediastinal fat removed during operation [2,3]. In this setting, again, the degree of uncertainty is witnessed by the lack of any validated ‘cut-off’ quantity. Following the lines of extreme simplification and briefly integrating the data reported by Lin [1], we could speculate that an approach which gives both the best exposure of the mediastinum with an ideally low to very low morbidity rate would meet all the requirements needed for an MG patient where surgery has been indicated. The cosmetic outcome could have its relatively high value, as often in young women. Our group has rich experience in thymectomy for MG patients and we have adopted, in this setting, an original approach for thymectomy with a video-assisted infra-mammary cosmetic incision and median sternotomy, originally described in 1999 and, to date, used in more than 180 cases with clinical results perfectly in line with the benchmark for the population in study and optimal cosmetic outcome [4]. Through a 5 ± 6 cm curvilinear incision at the median infra-mammary line we create a subcutaneous flap to perform a complete median sternotomy. The upper mediastinum and the lower neck regions can be well examined and a perfect control on the brachiocephalic and superior vena cava is possible with the aid of video-thoracoscope, introduced through the same incision. With this procedure we have a clear vision of the entire thymus, pericardium and adipose tissue along both phrenic nerves and the dissection can be performed with safety.

Indeed, the use of the video-assisted technique avoids potential dangers associated with transcervical thymectomy such as the crowding of instruments into a narrow access incision and restricted viewing of the operative field. A video of the operation can be seen at www.rm.unicatt.it/timectomia.

Herein we would kindly invite the authors to discuss our approach at the light of their experience: it seems, in fact, that our approach perfectly matches with the ‘pros’ of both a median sternotomy and a video-assisted approach and appears among the validated techniques as cited by Sonett and Jaretzky [5].

References


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doi:10.1016/j.ejcts.2009.09.005

Reply to Letter to the Editor

Reply to Cusumano et al. Open versus thoracoscopic thymectomy for non-neoplastic myasthenia gravis: a rejoinder

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Received 2 September 2009; accepted 4 September 2009

Keywords: Thymectomy; Myasthenia gravis; Minimally invasive surgery

We appreciate the observations and insights raised by Cusumano and co-workers [1] regarding our study on thymectomy for non-thymomatous myasthenia gravis (NTMG) [2].

We agree that the standard surgical approach for NTMG remains controversial. The goal of thymectomy in MG patients is to achieve the best complete stable remission (CSR) rate, which is related to the radical removal of thymic tissue [3]. Many different thymectomies can achieve this, including trans-cervical, trans-sternal and thoracoscopic.
Thoracoscopic thymectomy involves several different methods, such as video-assisted thoracoscopic surgery (VATS), subxiphoid approach and video-assisted infra-mammary cosmetic sternotomy.

In our opinion, the ideal thymectomy for NTMG must have two features: minimal invasiveness and a good CSR rate. VATS thymectomy is acceptable because of its minimal invasiveness and cosmetic wound, less tissue injury, short hospital stay, and low morbidity and mortality rates. Most importantly, it can achieve an acceptable CSR rate. VATS thymectomy may be limited by its difficult approach on the upper mediastinal and cervical fat. Although Jaretzki [3] reports that there may be some remnant thymic tissue in the mediastinal and cervical fat of the thymectomy specimen, we have not found any in the pericardial fat in the specimens of our 60 NTMG patients. Our study reveals that the CSR rate is not statistically different between the VATS and the trans-sternal groups. The relationship between ‘radical removal of thymus tissue’ and ‘radical removal of mediastinal and cervical fat’ may need further clarification.

We congratulate Dr Cusumano and co-workers for their excellent report [4]. The long-term result of their large series study shows that good CSR rate can be achieved with minimal-invasive wound through video-assisted infra-mammary cosmetic sternotomy thymectomy. The main advantage of this method is the similar vision and radical dissection of mediastinal tissue as that in the trans-sternal method, with only 5 ± 6 cm minimal-invasive cosmetic infra-mammary incision. We also agree that for thymomatous MG patients, especially those with a thymoma larger than 4 cm, this method can provide a clear vision of the entire mediastinum and is safer than the VATS approach. For NTMG patients, many studies show that the video-assisted methods are better than traditional sternotomy or trans-cervical thymectomies.

However, as yet, no study compares the two video-assisted thymectomies. Is sternotomy necessary for the radical removal of the upper mediastinal and lower cervical fat in NTMG patients, or can the thymus tissue just be removed together with the pericardial fat using VATS thymectomy? Are hospital stay and the severity of pain different between the two video-assisted thymectomies? Which one can achieve a better CSR rate?

Further randomised controlled studies are necessary to compare the result of the two video-assisted methods, including the postoperative data of patients, morbidity and mortality rates and the CSR rate.

References


Letter to the Editor

Technical modifications in bar removal in the Nuss procedure

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Received 19 August 2009; accepted 4 September 2009; Available online 26 September 2009

Keywords: Nuss; Pectus excavatum; Chest wall

We read with interest the recent article by de Campos et al. [1] describing their experience with the removal of the substernal bar after a Nuss procedure and the technical modifications to reduce the risk of bleeding. Our group has been very interested in the Nuss technique [2] and has published our modest experience with the technique and its complications [3,4]. There are several publications in the literature about the results, follow-up, etc., of the Nuss procedure, but very little is reported on the removal of the bar and the key to reduce the complications of this procedure. Recently, our group presented our experience [5] with 14 cases of bar removal, and we observed one intra-operative haemorrhagic complication, due to the laceration of an intercostal vessel, which forced us to extend the incision to control the bleeding.

We agree with de Campos et al. that the serrated edge of the bar can act as a hook, resulting in laceration of an intercostal vessel. In a personal communication, de Campos commented on his experience with the use of a protective plastic film around the bar at the serrated edge, and we have, since then, adopted it in our clinical practice, with very good results. Nowadays, a bar without a serrated edge is commercially available. We also agree with the de Campos et al. about the importance of the alignment of the bar before its removal for a safer procedure.

We have not used the other two technical modifications mentioned in their article but both seem appropriate for a successful procedure. We congratulate Dr de Campos and co-workers for their contributions to this minimally invasive technique that Dr Nuss ingeniously described as an alternative to the classical treatment of pectus excavatum.

References