

# Editorial on “Postoperative survival for patients with thymoma complicating myasthenia gravis – preliminary retrospective results of the ChART database”

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This article by Wang and coauthors analyzes the *preliminary retrospective results of the ChART database* on ‘Postoperative survival for patients with thymoma complicating myasthenia gravis’ (1). The Chinese Alliance for Research in Thymomas (ChART) registry recruited 2,306 patients with thymoma from 18 centers over the country in 20 (from 1992 to 2012) years with the intention to compare the postoperative survival between patients with thymoma only and those with both thymoma and myasthenia gravis (MG) so as to have a preliminary understanding of how MG affects the prognosis of patients with thymoma.

Staging and histology are described as the most important prognostic factors for thymic tumors (2). The completeness of the resection is also certainly another important prognostic factor even in advanced stages (3). Tumor diameter is also a reliable prognostic factor (3). These findings has been shown again in this study with multivariate analyzes. Almost half a century ago, MG was believed to affect the prognosis adversely. This impact disappeared by advances in medical management of MG. At least, presence of MG is no longer considered as a negative prognostic factor, and even most of the recent reports have suggested significantly better survival (4-6).

Conversely, other paraneoplastic syndromes are believed to affect the outcome of thymoma patients. In particular, acquired hypogammaglobulinemia, pure red cell aplasia cause significant morbidity (2). These syndromes include dermatopolymyositis, inflammatory bowel disease, pernicious anemia, rheumatoid arthritis, scleroderma and amyloidosis (2).

This study demonstrates 5- and 10-year OS rates were both higher in MG group (93% vs. 88% and 83% vs. 81%,

P=0.034, respectively). However, the survival rate was significantly higher in non-MG group when the Masaoka staging was 1 (P=0.000), and the result was opposite when the Masaoka staging was 3/4 (P=0.003). Only this analyze may show that the disease itself may not have an impact in survival of thymoma patients. But majority of difference may be coming from the histology and the size of the thymoma. There were significantly more proportion of patients with AB/B1/B2/B3 histology in the MG group while there were more patients with thymoma C in the non-MG group (P=0.000). Tumor size of MG group was also significantly smaller (6.4 vs. 7.9 cm, P=0.000) and the two groups were comparable in resectability.

MG does have an impact on patients with thymoma. However, the onset of MG is a good reason for the timely diagnosis (smaller thymomas, early stage) which increases the possibility of overall R0 resection rate, which is an independent prognostic factor according to the multivariate analysis of this study. On the other hand, occurrence of Type C thymoma is an exceptional condition in MG patients. As shown recently, Type C has a tendency to develop more distant and lymph node metastases. All these might account for the positive influence of MG on the long term outcome of subjects with thymoma. I believe the secret of MG stays in the prevention of the patients from type C thymoma. The molecular studies in near future may clarify why MG protects the patients from developing thymic carcinoma.

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## Footnote

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