AB037. PS02.01: Is it necessary a superpower to detect thymoma?

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Background: Thymoma is a rare epithelial tumor which is considered the most common mediastinal malignant tumor, accounting for 50% of anterior mediastinal lesions. The main thymoma-related paraneoplastic syndrome is the myasthenia gravis (MG), with 40% of patients developing myasthenic symptoms. The extended thymectomy is considered the gold standard as surgical treatment. Often, small Thymomas are undetected by imaging studies such as CT scan or MRI. The aim of this study was to analyze, retrospectively, the patients with Thymoma and MG undergoing thymectomy, including those patients with previously unsuspected diagnosis of Thymoma.

Methods: Fifty-six patients were retrospectively analyzed: 29 females, 27 males, mean age 55.9 years (range, 11–83 years). All of these were affected by MG undergoing extended thymectomy from January 2014 to December 2016. Forty-six/56 patients had a suspected lesion at CT/MR; 9/56 patients were judged as hyperplasia and 1 as thymic cyst, by the imaging. Thymectomy was performed by 2 surgical teams. Forty-two (75%) patients underwent thymectomy by cosmetic sternotomy, 14 (25%) by robotic technique (Da Vinci Intuitive Sunnyvale, CA, USA) with a left side approach. All patients with MG underwent a multidisciplinary board evaluation, including thoracic surgeons, neurologists, anesthetists and radiologists. All underwent a previous CT or MRI study.

Results: (I) Histological outcomes: accordingly with histological classification of thymomas we found: 10 type A (17.8%), 7 A/B (12.5%), 38 type B (68%: 6 B1, 22 B2, 7 B2/B3, 3 B3) and 1 (1.7%) microthymoma. The main diameter of the lesion was 4.9 cm (range, 0.5–13 cm). In one case (microthymoma) thymic capsule was not involved by the tumor. In 38 patients (67.8%) an infiltration of the mediastinal fat tissue was found and in other 17 (30.3%), only the capsule was involved by the tumor. (II) Neurological outcomes: accordingly with Osserman classification of Myasthenia Gravis, in our cases, were founded: 14(25%) class I, 35 (62.5%) class II (4 class IIA, 31 class IIB), 7 (12.5%) class III (5 IIIA, 2IIIB). (III) Previously unsuspected diagnosis of thymoma: in 46 MG patient out to 56 (82.2%), a suspected thymoma was described by the pre-operative CT or MRI. In 10 MG patients (17.8%) the thymoma was undetected by the imaging studies (CT or MRI) and diagnosis of thymoma was suspected only after the multidisciplinary board evaluation (9 for thymic nodular hyperplasia, 1 for thymic cyst).

Conclusions: Our study shows a high percentage (17.8%) of undetected thymoma in MG patients with nodular hyperplasia. We believe that an expert multidisciplinary board can be careful in order to obtain a more accurate evaluation especially in small thymomas which can be missed in MG with hyperplasia. However larger series are needed for consistent long term outcomes

Keywords: Myasthenia gravis (MG); thymoma; minimally invasive surgery; thymoma diagnosis

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