AB002. Prednisone as neoadjuvant therapy in thymomas

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Background: Thymomas are rare tumors arising in the anterior mediastinum. They are characterized by a usually indolent behavior and a frequent association with paraneoplastic autoimmune syndromes [mostly myasthenia gravis (MG)]. Hence, thymoma patients are often given glucocorticoid therapy at the moment of diagnosis. Some previous case reports/series described the association between steroid therapy administration and significative tumoral shrinking.

Methods: The aim of this study is to analyze the impact of corticosteroid therapy (oral prednisone) on thymomas' dimensions. We retrospectively collected data on clinical features, ongoing steroid therapy and thymoma's dimensions [measured both at the computed tomography (CT) scan performed at the moment of diagnosis and preoperatively], histology (according to the World Health Organization) and staging (according to the Masaoka-Koga system) of all patients who underwent surgery for thymoma since January 2019 in our unit. Patients who received neoadjuvant chemotherapy were excluded from this study. Tumor responses were evaluated according to the International Thymic Malignancies Interest Group (ITMIG) Modified Criteria: complete response (CR), partial response (PR), stable disease (SD), progression of disease (PD).

Results: The study population is composed by 17 males and 33 females, mean age 57.5±11.8 years. Thirty-three patients (66%) were also affected by MG. Thymoma's stages were distributed as follows—I: 12%, IIA: 32%, IIB: 42%, III: 10%, IVA: 4%. Histologic subtypes were—A: 6%, AB: 34%, B1: 12%, B2: 36%, B3: 12%. The median time between the first and the preoperative CT scan was 2.3 months (interquartile range: 1.54 months). At the moment of surgery, every myasthenic patient was under prednisone therapy since the diagnosis of thymoma/MG (mean dosage: 40±15 mg/day, range: 25–75 mg/day). Of them, 24 (72.7%) presented a PR, 8 (24.2%) had a SD, while one subject (3.1%) presented a PD. Seventeen patients (34%) were not under glucocorticoid treatment: 13 subjects (76.5%) had a SD, 4 (23.5%) a PD (P<0.001). The majority of PR occurred in the B1-B2-B3 subtypes (P=0.003).

Conclusions: Oral prednisone therapy at medium/high dosages (≥25 mg/day) is effective in provoking tumoral reduction in patients with thymoma, especially in those rich-in-lymphocytes subtypes. Glucocorticoids should be administered since the moment of diagnosis of thymoma until surgery, unless there are contraindications, in an attempt to achieve tumoral shrinking.

Keywords: Thymoma; glucocorticoid therapy; thymoma surgery

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at https://med.amegroups.com/article/view/10.21037/med-23-ab002/coif). The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The study was conducted in accordance with the Declaration of Helsinki (as revised in 2013). The study was approved by the local ethical committee (CEAVNO: Comitato-Etico-Area-Vasta-Nord-Ovest, No.: CEAVNO07032022) and individual consent for this retrospective analysis was waived.

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