

AB001. A study of the association between thymic malignancy histology and autoimmune paraneoplastic syndromes and opportunistic infections

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Background: The thymus plays a key role in development T lymphocytes and immune self-tolerance. This process is disrupted in thymic malignancy, resulting in patients developing an array of paraneoplastic autoimmune presentations, particularly myasthenia gravis (MG), or opportunistic infections. The histology of thymic malignancy is commonly staged and classified using the Masaoka-Koga and World Health Organization (WHO) systems respectively. There is limited evidence surrounding the relationship between opportunistic infections and autoimmune paraneoplastic syndromes, and the WHO classification and Masaoka-Koga staging of thymic malignancy. This study aimed to investigate the occurrence of opportunistic infections and paraneoplastic autoimmune conditions in patients with thymic malignancy and MG, and their relationship with clinical presentation and tumour staging and classification.

Methods: The medical records of all patients with a diagnosis of MG and thymoma who had undergone thymectomy at Oxford University Hospitals from 1970 to January 1st 2023 were manually reviewed. A variety of types of statistical analysis were then performed using SPSS to address the study aims.

Results: A total of 109 patients meeting the inclusion criteria were identified, with a female preponderance (72 patients). The current ages ranged from 31–102 (mean =65.90). There was no significant difference with age or sex in the prevalence of autoimmune disorders, recurrent infections or the type of thymic tumour. A higher WHO classification of thymic malignancy was associated with increased recurrence of opportunistic infection post-thymectomy, while a higher Masaoka-Koga staging was associated with an increased presentation of paraneoplastic autoimmune syndromes post-thymectomy. Furthermore, a moderate relationship was identified between occurrence of opportunistic infection and the presence of multiple paraneoplastic autoimmune conditions.

Conclusions: This study demonstrated an association between WHO classification, Masaoka-Koga staging, paraneoplastic syndromes and opportunistic infections in patients with MG and thymoma who underwent thymectomy. This suggests that early staging and classification may aid the prediction of future immunological behavior and clinical outcomes. Further studies are required to better understand these associations and potentially develop predictive models for clinical use.

Keywords: Thymoma; infection; paraneoplastic; myasthenia gravis (MG)

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Footnote

Conflicts of Interest: All authors have completed the ICMJE uniform disclosure form (available at <https://med.amegroupp.com/article/view/10.21037/med-23-ab001/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 Research Ethics Committees (REC reference number 16/YH/0013 V3; 18-01-2023) and individual consent for this retrospective analysis was waived.

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