

AB011. Thymoma in patient receiving tyrosine kinase inhibitor (TKI) treatment: morphological aspects and surgical approach

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Background: Herein we report a case of thymectomy performed by bilateral hybrid RATS/VATS technique with the Versius Robotic System (CMR Surgical, Cambridge, UK) in a patient affected by thymoma with cystic-necrotic regression and chronic myeloid leukemia (CML) treated with Imatinib.

Case Description: A 74-year-old woman was referred to our Centre in November 2021 for an occasional finding of anterior mediastinal masses detected by magnetic resonance imaging (MRI)-scan during regular follow-up for benign pancreatic cysts. The patient was asymptomatic, without any neurological signs of myasthenia gravis. She referred a previous history of thyroidectomy for multinodular goiter and CML, for which she assumed Levotiroxin and Imatinib. Computed tomography (CT)-scan confirmed the presence of a 5.5 cm left-sided dishomogeneous mediastinal mass and a 3 cm right paracardiac partially cystic lesion. Both masses had an increased fluorodeoxyglucose (FDG) uptake at the CT/positron emission tomography (PET)-scan with SUVmax 9.8 for the left lesion and SUVmax 3.6 for the right one. Therefore, the patient underwent surgical radical thymectomy with hybrid bilateral technique: we used the Versius Robotic System (three-port technique) for exeresis of the left masses and we performed a standard three-port

thoracoscopy to complete the dissection of the second lesion on the right side. The procedure was uneventful. Only one left chest tube was positioned and then removed on the 3rd post-operative day. The patient was discharged on 4th post-operative day without any complications. Diagnosis: anatomopathological examination described the left mass as a 5.5×5.4 cm type B2 thymoma (cytokeratin AE1/AE3+, p40+, CD5-, CD117-, CD20-) with aspects (<10%) of B3 thymoma and coagulative necrosis with microcalcification, crystal of cholesterol and lymphohistiocytic phlogosis; macroscopic infiltration into the fatty tissue was highlighted. The right lesion was described as thymic residual with cystic aspect and B2 thymoma outbreak.

Conclusions: We validated our mini-invasive hybrid robot-assisted thoracoscopic surgery/video-assisted thoracoscopic surgery (RATS/VATS) technique as a feasible and safe surgical approach for complex anterior mediastinal lesions. Moreover, in this case, anatomopathological examination suggests an important role of Imatinib in the cystic-necrotic regression of thymoma; this finding could support further studies involving tyrosine kinase inhibitors (TKI) in the treatment of thymic neoplasms.

Keywords: Thymoma; robot-assisted thoracoscopic surgery (RATS); tyrosine kinase inhibitor (TKI)

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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-22-ab011/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.

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