

## Discussion

*Dr. Hon Chi Suen (Hong Kong, China): The MRI showed infiltration of the endothoracic fascia that CT and PET scan did not show. Did this finding alter the surgical approach and if it did, how?*

Dr. Thomas Frauenfelder (Zurich, Switzerland): Dr. Suen raises an important question. In patients with diffuse malignant pleural mesothelioma scheduled for macroscopic complete resection (either by extended pleurectomy and decortication or extrapleural pneumonectomy) after induction chemotherapy, the detection of multilevel chest wall infiltration is most commonly a reason to refrain from radical surgery. In patients where multilevel chest wall infiltration is identified intraoperatively by repeated biopsies and frozen section of suspicious lesions, a parietal pleurectomy without decortication of the visceral pleura is in our opinion a reasonable alternative. We experienced that this approach reduces the duration of postoperative air-leak, while still enabling a de-bulking. In patients where a multilevel chest wall infiltration is preoperatively seen in the MRI, the further treatment plan should be re-discussed at an interdisciplinary tumor board with attending experts in medical oncology, thoracic surgery and radiation oncology.

In our case, the infiltration into the endothoracic fascia was localized to the single tumor bulk and was not considered to be multifocal. We therefore proceeded with the intended resection. However, in patients with unifocal chest wall infiltration we intraoperatively mark the affected area with metal clips in order to facilitate the targeting of a potential adjuvant stereotactic body radiation therapy.

*Dr. Suen: The localized main bulk of tumor was transdiaphragmatic. Would you have performed a laparoscopy first to see if there was diffuse peritoneal mesothelioma as well?*

Dr. Frauenfelder: This is an excellent remark. Due to the localized appearance of the mesothelioma without radiological signs of further pleural, abdominal or mediastinal lesions, the patient was directly referred for resection of the tumor. With respect to the disseminated disease that was detected intraoperatively, a preceding laparoscopy could have been considered in hindsight.

*Dr. Suen: Since initially, it was thought that the tumor was localized to the diaphragm and the plan was to perform a local excision, what was the incision? When it was found that there was actually diffuse malignant pleural mesothelioma, how was the incision modified to accomplish pleurectomy and decortication of the entire left chest?*

Dr. Frauenfelder: Dr. Suen addresses a crucial factor of our surgical approach for malignant pleural mesothelioma. For extended pleurectomy and decortication, as well as for extrapleural pneumonectomy we perform an extended lateral thoracotomy and enter the 6th intercostal space. In all cases, the costal arch is ventrally excised for an improved exposure of the situs. This maneuver considerably facilitates the dissection of the costophrenic sinus and resection of the diaphragm. Therefore, no further utility thoracotomy is required.

Since in our case, a local resection and reconstruction of the diaphragm had already been planned, the abovementioned incision was performed in the first place and was well suitable for the subsequent pleurectomy and decortication.