Case Methodology: We are presented with an asymptomatic 27-year-old male overseas worker whose routine annual chest radiograph revealed an incidental finding of a right lung mass. Further evaluation with chest CT scan revealed a 10.2 x 10.1 x 9.9 cm posterior mediastinal mass. With these findings, the patient was admitted for surgery. Physical examination, laboratory work-ups, and pulmonary function tests revealed normal results. The patient underwent thoracotomy of the right hemithorax. Intraoperatively, an elongated, pulsatile, fixed mass measuring 10 x 12 x 12 cm occupying the middle and posterior mediastinum extending from the azygous vein down to the diaphragm was noted. Microscopic examination of the resected tissues showed fibrocollagenous and adipose tissue fragments with several variably sized vascular channels with no evidence of malignancy. Large caliber arteries and veins were encountered and there was excessive bleeding hence, total excision of the mass was aborted.

Results: Histopathologic examination revealed fibrocollagenous and adipose tissue with several irregular thick-walled vascular channels, nerve bundles, lymphocytic infiltrates, and hemorrhagic areas. The final anatomic diagnosis was: Fibrocollagenous tissue with proliferating blood vessels. A hemangiomia and/or arteriovenous malformation is considered. Elastic stain and immunohistochemical staining were done. Thick-walled blood vessels were highlighted by elastic stain. The endothelial cells were immunoreactive to Factor VIII. S100 stained a nerve bundle and isolated neural cells. Positivity to CD31 was also observed on the cells lining the vessels. The immunohistochemical staining result supported the diagnosis of arteriovenous malformation.

Conclusion: We report a rare case of posterior mediastinal arteriovenous malformation in a 27-year-old male. This is a case of an uncommon tumor in a very unusual location. The advent of immunohistochemistry has aided in classifying proliferating vascular tumors. The need to identify markers for the prognostic significance was emphasized, providing the opportunity to better inform our clinical colleagues. Due to the rarity of the disease, it posed a great dilemma which required a multidisciplinary approach. It provided a diagnostic and surgical challenge to our clinicians, radiologists, pathologists, and thoracovascular surgeons as well.

Method: We studied 51 patients with AD and 49 patients with SQ who underwent surgery from April 2001 to June 2005. The resected specimens were fixed in formalin and stained with hematoxylin and eosin to identify tumor cells. Thus, only tumor cells were collected and the m-RNA expressions of TS, DPD, TP and OPRT were quantified using Danenberg tumor profiling technique. These m-RNA expressions obtained were compared between the AD and SQ groups. Pathological stage did not differ between the AD and SQ groups. Since mean age and gender population were significantly different between the two groups, the data were adjusted by analysis of covariance.

Results: m-RNA expressions of the 4 enzymes in the AD and SQ groups were as follows:

<table>
<thead>
<tr>
<th></th>
<th>TS</th>
<th>DPD</th>
<th>TP</th>
<th>OPRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD (n=51)</td>
<td>1.60±0.86</td>
<td>2.29±1.22</td>
<td>9.52±6.30</td>
<td>0.85±0.53</td>
</tr>
<tr>
<td>SQ (n=49)</td>
<td>4.33±3.35</td>
<td>1.52±1.20</td>
<td>16.27±11.84</td>
<td>2.26±1.14</td>
</tr>
<tr>
<td>p-value</td>
<td>&lt;0.0001</td>
<td>0.002</td>
<td>0.007</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

The m-RNA expressions of TS, DPD, TP and OPRT were significantly different between the AD and SQ groups. The m-RNA expressions of the 4 enzymes were not different between pathological stages or gender, respectively.

Discussion: 5-Fu is theoretically more effective to tumor cells when the tumor cells have low activity of DPD, TP and OPRT. It is also reported that tumor cells with low TS activity is more sensitive to 5-Fu. Our study suggested that UFT may be more effective to AD than SQ because AD tumor cells have low TS activity and because additive Tegafur sufficiently suppresses high DPD activity of AD tumor cells.

Conclusions: m-RNA expressions of TS, DPD, TP and OPRT were significantly different between the AD and SQ groups. These results may provide some insight of mechanism in which UFT is more effective to AD than SQ in primary lung cancer.

P1-165 Pathology Posters, Mon, Sept 3

Influence of tumour patterns in mixed-type adenocarcinoma on post-operative survival

Kerr, Keith M.1 Frye, Nicky2 Nicolson, Marianne C.2 Lyall, Matthew S.2 Bakar, Salma2 Thomas, Stuart C.2
1 Aberdeen University Medical School, Aberdeen, UK 2 Aberdeen Royal Infirmary, Aberdeen, UK

The 2004 WHO classification of pulmonary adenocarcinomas recognises that most tumours are a mixture of up to four different tumour patterns: acinar, papillary, bronchioloalveolar (BAC) and solid adenocarcinoma. There is little data on the prevalence of different patterns within resected adenocarcinomas and what influence they may have on tumour behaviour. Predominance of the BAC pattern has been associated with a good prognosis while poorly differentiated (solid) or papillary tumour may be associated with a poor prognosis but these data are not necessarily expressed in the context of current methods of classifying adenocarcinoma.

Aim: To sub-categorise surgically resected pulmonary adenocarcinomas by patterns of tumour and relate this to post-operative survival.

Methods: All histological slides from 170 resected adenocarcinomas were reviewed and the proportion by area, to the nearest 10%, that of each of the four patterns of tumour (BAC, acinar, papillary and solid) occupied in the haematoxylin and eosin stained sections was recorded.