

cor pulmonale. Bilateral pleural plaques were present and a 5 cm. calcified pleural plaque. The lungs showed a moderate degree of old fibrotic collapse, some carbon pigment, and shotty thickening consistent with patchy fibrosis. There was a chronic peptic ulcer. Widespread and generalized thickening of the peritoneum with numerous irregular flattened nodules and plaques was present, and there was a confluent firm mass 5 cm. across in the omentum. Discrete nodular deposits were seen in the pancreas and porta hepatis. The right lobe of the liver contained a large yellowish-white rounded nodule mainly in its substance but in contact with the serous surface anteriorly.

Histological examination of the lungs confirms asbestosis. The small bowel shows greatly thickened serosa, which is mainly spindle-celled, but also contains spaces lined by cuboidal and flattened cells. A few lymphocytes and some fibrinoid necrosis are unusual features, and similar tissue in the liver shows extensive necrosis.

Case No. 3M [London Hospital 190984].—This man died at the age of 52 with 'peritoneal endothelioma and asbestosis'. He had been exposed to mixed asbestos dust from 1930 to 1934 in the carding department. Pulmonary asbestosis was diagnosed during his stay at the London Hospital in 1963. This admission was for pain in the loins and under the right costal margin, anorexia, loss of weight, general malaise, and pyrexia. At laparotomy the liver was found to be slightly mottled and granular with many adhesions between the lobes of the liver and the diaphragm on the right. No obvious masses were found in the liver, but in the porta hepatis there was a big irregular mass continuing into the liver, and there were also multiple para-aortic glands. Some of the mass was excised for biopsy. The patient was followed up in the out-patient department but died at home two months after discharge from the ward.

The following is the biopsy report from the London Hospital: 'Malignant papillary-tubular neoplasm, possibly but not characteristically renal in origin. Primary peritoneal endothelioma is suggested by the persistent cleft formation and the large dark cells'.

At necropsy on July 29, 1963 Dr. D. Rushton found extensive adhesions at the base of the right pleural cavity and the dorsal region of the lung. The lungs were tough to feel, firmer than normal, collapsed, and oedematous. There was old tuberculosis at the right apex, but the gross characteristics were not obviously asbestotic. Sections from the lung, however, showed fibrosis and asbestos bodies.

The peritoneal cavity contained a large amount of turbid yellow fluid. There were widespread numerous small white nodules scattered over the whole surface of the small bowel, the large bowel, and the peritoneal surface generally. The diaphragm was extensively adherent to the upper surface of the liver. There was a large growth 4 in. (101.6 mm.) in diameter and white in colour near the liver hilum, which did not involve the stomach. The entire pancreatic head was replaced by growth. Dr. Rushton registered the cause of death as 'carcinomatosis due to carcinoma of the pancreas'. The necropsy sections

from the mass are predominantly necrotic fibrous tissue but the typical clefts and papillary formations are seen.

Case No. 4F [King George's Hospital 98753].—This woman died at the age of 61 with 'generalized carcinomatosis of the abdomen'. She had had eight years' exposure to mixed asbestos dust from 1916 in the jointing and mattress department in the days before the hazard was appreciated. Asbestos bodies were found in the sputum in 1956 and a radiograph showed some degree of asbestosis. The terminal illness began three months before death with abdominal swelling, discomfort, and loss of weight. When admitted to King George's Hospital she was found to have abdominal masses, an enlarged liver, and ascites. She died within a few days of admission in 1962.

At necropsy Dr. J. Spencer found pleural adhesions and thickening with little pulmonary fibrosis. The entire peritoneum, including the diaphragm, was studded with firm creamy new growth, which was also present on the surfaces of the liver and spleen. The ovaries and uterus were embedded in a mass of tumour.

Histological examination of the necropsy material confirms extensive pulmonary asbestosis. The bowel wall is thickened by 8 mm. of reactive fibrous tissue in which there are some clefts lined by pseudo-epithelium. Birefringent spicules 5×1 microns can be found.

Case No. 5M [London Hospital 141164].—This man was discharged from the London Hospital with an inoperable malignant growth in the peritoneum. At the time of writing he is alive and apparently well 10 months after biopsy. He had been exposed to mixed asbestos dust from 1937 to 1940 and again from 1945 to 1955, when asbestosis was diagnosed. The development of a pleural effusion in 1961, with its sinister implications, led to thoracotomy. There was no evidence of malignancy, but a collapsed right lower lobe and a large amount of clear straw-coloured fluid were removed. The removed lobe was clearly asbestotic. One year after lobectomy he was re-admitted for investigation of dyspepsia with pain, vomiting, flatulence, and ascites. At laparotomy there was marked straw-coloured ascitic fluid and multiple small metastases covering the peritoneum. The omentum was shrivelled and indurated, and on the upper surface of the left lobe of the liver was a peritoneal plaque. No secondaries were seen in the liver. The condition was considered to be inoperable, and a biopsy was taken from the omentum.

Specimens from both operations were kindly supplied by Dr. D. Hourihane of the Bernard Baron Institute. The lobectomy specimen confirms the presence of advanced asbestotic fibrosis, but there is no tumour. The abdominal biopsy shows cuboidal and columnar cells forming clefts, solid masses, and alveoli. The histological appearances in this case are more reminiscent of adenocarcinoma than in any of the other cases described, but, in view of the characteristics seen in the whole series and the absence of any mucus secretions, this diagnosis is discarded and the case is included.