TABLE 2

No. and Sex	Survival after Onset of Symptoms	Survival after Biopsy	Dyspnoea	Abdominal Pain	Ascites	Abdominal Distension	Vomiting	Anorexia	Constipation	Weight Change
1F	2½ months	2 months	–	+	+	+	0	0	0	Loss
2F	19 months	No biopsy	+	+	+	+	0	+	+	0
3M	6 months	2½ months	–	+	+	+	–	+	0	Loss
4F	3 months	No biopsy	+	+	+	+	+	+	+	Loss
5M	Alive after 10 months	Alive after 10 months	+	+	+	+	+	–	–	Gain
6M	4 months	3 months	+	+	+	+	+	0	0	Gain
7M	2 months	No biopsy	–	–	+	–	–	+	0	Loss
8M	6 months	7 days	–	+	+	–	+	0	+	Loss
9M	6 months	1 month	+	+	+	+	0	0	0	0
10M	4 months (Keal, 1960)	No biopsy	+	+	+	+	0	+	0	0
11M	14 months (Heard and Williams, 1961)	6 months	–	+	+	+	0	0	0	Gain

+ Present; – Absent; 0 Not recorded.

to 'partial' disability permitted to the assessors under the special legislation introduced to cover those workers whose disease was (*a*) diagnosed after July 5, 1948, too late for Workmen's Compensation, and (*b*) due to exposure which ceased before July 5, 1948, too early to benefit under the present scheme.

Histological Appearances

Table 3 shows the components of the histological picture and sets out their occurrence in the different cases. In six of them the disease was seen at two stages, *e.g.* in biopsy and necropsy specimens, and in none of these was the picture identical in both specimens.

In the biopsy material fibrous tissue is relatively scanty and more regular, most of the specimens consisting of pseudo-epithelial formations. The cells in it are almost spherical, and multilayers are common. In most of them no birefringent material is seen, but in the specimen from case 11M one particularly obvious piece 7 microns long is present.

The tumour material recovered at necropsy, on the other hand, consists mostly of irregular fibrous tissue in which a variable number of clefts have formed. Lining them and on the surface of the tumours are cuboidal, polygonal or columnar cells. This lining is usually formed of a single layer but occasionally is several cells thick. In some places within the tumour there are solid cords and masses of more than a hundred cells but these are not clearly differentiated from the fibrocytic stroma and merge imperceptibly with it. Stains for carbohydrate by the periodic acid Schiff reagent are negative. Histochemical tests for hyaluronic acid gave negative results in our hands, but only two of the tumours were fixed as recommended by Wagner, Munday, and Harrington (1962), the remainder being treated with aqueous formalin. Reticulin was demonstrated in variable amounts in five of the tumours examined.

Various physical methods have been used to investigate the tumours. Examination under polarized light reveals a few small birefringent particles but does not show any Newton's colours. These are too small, being less than 3 microns long, properly to be called fibres, but their extinction angle is parallel to their long axis, as it is in asbestos fibres. Preparations of fine dust particles of comparable size, kindly provided by Dr. A. A. Hodgson of the Cape Asbestos Company, show very similar appearances, although at this size many of the fibres are not birefringent. Furthermore, the asbestos fragments seen in degenerating pulmonary bodies are usually of similar size and appearance. Material from three of the tumours has been calcined in an attempt to recover asbestos fibres, but none has been demonstrated.

Case Histories

One typical male case and one typical female case are presented in some detail. The third case presented is unusual in that two primary tumours are described. The remaining case histories are condensed. The clinical features are summarized in Tables 1 and 2 and the pathological findings in Table 3. In the tables the cases are arranged in order of the length of exposure.