minutes, before a dose of phentolamine could be administered. After the attack the blood pressure was again 160/90. The histology of the liver was normal.

On further questioning the patient gave a history of occasional similar attacks which she had had for about eight years. These usually occurred in the mornings, especially on bending down in the course of her housework. They usually lasted about half an hour and vomiting occurred occasionally. She would sit down during the attacks and wait for them to pass off.

Attempts made to precipitate an attack by pressure in the loins, by walking, and by bending all failed. Several very short spontaneous attacks occurred, none lasting long enough for any phentolamine to be given. However, on August 16 a longer attack occurred, and 5 mg. of phentolamine intravenously reduced the blood pressure from 250/150 to 170/90 almost immediately.

Meanwhile an intravenous pyelogram had shown non-filling of the upper calices of the right kidney, and a retrograde pyelogram and simultaneous presacral air insufflation showed a tumour in or above the upper pole of the right kidney.

The 24-hour urine catechol amine excretion values were as follows (expressed as adrenaline): July 24, 500 μ g., July 29 to August 3, 420, 435, 480, 480, 470, 440 μ g. (This shows a small but consistent increase in catechol amine excretion by the method used, which has given a value of less than 300 μ g. in 97% of patients without a phaeochromocytoma.)

On August 20 an exploration of the right kidney was done by Mr. Thomas Moore and a right nephrectomy performed. The kidney was cystic and there was what appeared to be a particularly large cyst at its upper pole. No right adrenal could be seen at operation. Until the kidney was removed there were bursts of hypertension up to 250/160 which responded to intravenous phentolamine. In all, 55 mg. of phentolamine was given. A severe slump in the blood pressure after the nephrectomy led to treatment with a noradrenaline intravenous drip, which had to be continued for 36 hours. The blood pressure was then a steady 150/80. Apart from a slight chest infection which responded readily to penicillin, the patient's post-operative progress was uneventful. Three estimations of the 24-hour output of catechol amines after operation showed 135, 130, and 150 μ g.

Photograph of specimen.

was very well. The 24-hour urinary output of catechol amines was 250 μ g.

The specimen removed consisted of a hypoplastic kidney 7 by 4 by 3.5 cm., and attached to its upper pole there was a rounded encapsulated cystic tumour 9 cm. in diameter (see illustration). The kidney capsule was continued over the tumour. Histologically the tumour was a typical non-malignant phaeochromocytoma. The cyst fluid contained

71.5 mg./litre total catechol amines expressed as adrenaline. The kidney was cystic. Histologically there were no malignant hypertensive changes.

COMMENT

The condition of adrenal-renal heterotopia (O'Crowley and Martland, 1943) may be complete or partial. It is interesting to note that, normally, in the complete cases no medullary cells are found, the subcapsular adrenal consisting of thin cortical tissue only. In the case described the condition appeared to be a complete one. In all of O'Crowley and Martland's cases the condition of adrenal-renal heterotopia was bilateral.

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Needle Biopsy of the Parietal Pleura in Malignant Disease

Pleural effusions in the middle-aged often present a puzzling problem in aetiology. Malignant cells are found in the fluid in less than 50% of cases (Donohoe *et al.*, 1957). Heller *et al.* (1956) and Donohoe *et al.* (1957) have used a Vim-Silverman needle to obtain specimens of parietal pleura. By this method the former confirmed the diagnosis in three cases of malignant pleural effusion out of four. The latter, in 11 suspect cases of malignant effusion, obtained eight adequate specimens, and four of these showed evidence of malignancy. Mestitz *et al.* (1957), using an Abrams (1958) needle, investigated 25 cases with suspected malignant pleural effusion. He obtained an adequate amount of tissue in 22, and in 12 of these the diagnosis of malignancy was confirmed, while the remaining 10 biopsy specimens were reported on as being non-specific inflammatory. In three instances an inadequate amount of tissue was obtained. Again, Mestitz (1958) states that he and his colleagues are of the opinion that by means of an Abrams needle the diagnosis of malignancy can be confirmed in at least 60% of malignant effusions. In 1957 Weiss stated: "Although pleural biopsy may occasionally demonstrate a malignant pleural condition, the procedure is of value chiefly in establishing the presence of tuberculosis" (*Lancet*, 1958).

I have carried out 22 biopsies in 20 cases of pleural effusion in association with malignant disease. In nine I used a Vim-Silverman needle, and in the remainder an Abrams needle. It proved to be much more difficult to obtain a satisfactory specimen with the former

needle, and even if successful, it was only 2 by 3 mm. and therefore difficult to handle. There were no complications of any kind with either needle.

In 12 cases (60%) the diagnosis was confirmed, in seven (35%) non-specific fibrous tissue was obtained,

it can be carried out even in severely ill individuals without the fear of serious complications.

I am indebted to my colleagues, Dr. L. W. Carstairs and Dr. C. Verity, for details of Cases 3, 16, and 19; to Dr. W. R. Ashby, Dr. R. E. Irvine, and Dr. L. Feinmann

Details of Cases

Case No.	Needle Biopsy	Site of Primary Growth	Broncho-scopy	Broncho-graphy	Pleural Fluid	Sputum	Remarks
1	Anaplastic carcinoma	Lung	N.A.D.		Malignant cells	Negative	
2	Inadequate	"	"		Negative		
3	Anaplastic carcinoma	"	Carcinoma		"	Malignant cells	
4	Non-specific	"	N.A.D.		"	Negative	Confirmed necropsy
5	Squamous carcinoma	"	N.A.D.	"	"	"	
6	Non-specific	"	"	Bronchial block	"	"	
7	"	"	"	N.A.D.	"	"	Confirmed thoracotomy
8	"	"	"		Malignant cells	"	
9	"	"	"	Bronchial block	"	Malignant cells	
10	Carcinoma	"	"		Negative	Negative	
11	Non-specific	"	"		Malignant cells	"	
12	Carcinoma	Pleura	"		"	"	Confirmed necropsy, endothelioma
13	Adenocarcinoma	? Colon	N.A.D.		"	"	
14	Anaplastic carcinoma	? Kidney	"		Negative	"	
15	Sarcoma	Knee	"		"	"	
16	Anaplastic carcinoma	Pancreas	"		Malignant cells	"	Confirmed necropsy
17	Carcinoma	Colon	"		Negative	"	
18	Non-specific	Breast	"		? Malignant cells	"	
19	Carcinoma	"	"		Negative	Negative	
20	"	Stomach	"		"	"	Confirmed with barium meal

FIG. 1

FIG. 2

and in one case the specimen was inadequate (see Table). In those cases of lung cancer in which ancillary investigations such as bronchoscopy, bronchography, and pleural or sputum cytology were negative, the radiological appearances were characteristic enough to confirm the finding of malignant pleural infiltration by needle biopsy.

Even with the small biopsy specimen obtained with the Vim-Silverman needle, it is easy to recognize malignant tissues if present (Figs. 1 and 2).

Malignant cells were demonstrated in eight (40%) cases when the pleural fluid was examined, and in the case of bronchial carcinoma they were present in four (36.4%) cases. Malignant pleural infiltration was demonstrated in only four out of a possible eleven cases of lung cancer, while confirmation of the clinical diagnosis was obtained in eight out of nine cases in the miscellaneous group of malignancies.

This does not mean that the lung cancer cases had a particularly good prognosis, as all were quite inoperable and all these patients have now died of the disease.

In six (30%) of the cases the only means of diagnosis was needle biopsy, while in a further six (30%) it was confirmatory. In the remaining eight (40%) the diagnosis was obtained by means other than needle biopsy. It is certainly possible that this group could have been further reduced if repeated biopsies had been carried out in these cases.

It would therefore appear that this procedure is useful in all cases of suspect malignant disease and that

for referring Cases 8, 10, and 11. This work would not have been possible without the constant help and encouragement of Dr. B. E. Tomlinson, who is responsible for all the histology reports on the biopsy specimens. I am indebted to the department of pathology, Newcastle upon Tyne General Hospital, for the photomicrographs.

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In its survey of the general trends of the year from May, 1958, to April, 1959, the National Council for the Unmarried Mother and her Child recognizes an increase in the number of married women, separated from their husbands, who have illegitimate children. It also notes the increase of illegitimate pregnancies among teen-age girls. Another serious problem is the number of foreign unmarried mothers, 247 of whom were helped by the Council last year. Sixty-four were German and 57 Italian girls. (39th Report, National Council for the Unmarried Mother and her Child.)