the two conditions (Sampson, 1958). Reviewing this problem, Tredway and Kemble (1958) reported three cases of dissecting aneurysm of the aorta, in two of which elevated S.G.O.T. activity was found. In these two cases the maximum level of S.G.O.T. was 115 and 135 units, and this they attributed to pericardial haemorrhage due to extension of the dissection into the pericardial sac. They concluded that the test was not of very great value as an aid to the diagnosis of this disorder. In the remaining three cases reported in the literature normal values of S.G.O.T. were found. This differentiation can be of considerable importance, as the treatment of the two conditions differs, and surgical operations are now being successfully performed for the relief of aortic dissections. However, surgery is contraindicated in cases with cardiac tamponade and established anuria (Rob and Kenyon, 1960).

In only one of the cases described above (Case 1) were high values for both S.G.O.T. and serum glutamic pyruvic transaminase (S.G.P.T.) activities found. Several mechanisms could have accounted for this rise:

1. Myocardial necrosis consequent upon subepicardial haemorrhage due to extension of the dissecting aneurysm.

2. Acute congestion of the liver.—Apart from primary hepatic disorders, high values of S.G.O.T. activity (700 to 3,000 units) have been recorded in cases exhibiting acute congestion of the liver due to acute heart failure (Shields and Shannon, 1958). In Case 1 there was both clinical and post-mortem evidence of acute hepatic congestion, and we believe that this was a major factor in the production of the high S.G.O.T. and S.G.P.T. activities recorded.

3. Codeine therapy and renal failure.—Although little is known of transaminase excretion it is thought that the role of the kidney in this process is a small one, as only minute quantities of the enzymes have been found in the urine of normal subjects. This view would appear to be supported by the finding of a normal S.G.O.T. activity (18 units) in a case of anuria reported by Chinsky *et al.* (1956) and in a case of obstructive anuria we have recently observed with values of 6 units (S.G.O.T.) and 1 unit (S.G.P.T.). It has been previously suggested that codeine causes a rise in S.G.O.T. and S.G.P.T. activity (Foulk and Fleisher, 1957). Case 1 received small doses of codein. co. orally, and this may have contributed to the raised S.G.O.T. and S.G.P.T. activities. Further retention of this drug in the body, as a result of acute renal failure, may have been an added factor.

Conclusion

It would appear that in dissecting aneurysm of the aorta there can arise factors such as heart failure, with acute hepatic congestion or extension of the aneurysm into the heart and pericardium, which could elevate the S.G.O.T. and S.G.P.T. activities. On the other hand, if the dissection has not produced these complications (as in Cases 2 and 3) normal serum transaminase activities would be expected. With these facts in mind we take the view that the transaminase test has a place in the diagnosis and management of dissecting aneurysm of the aorta.

We are indebted to Dr. William Phillips, under whose care these patients were admitted, for his helpful advice and criticism, and to Mr. L. P. Thomas for permission to publish the operative details.

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LATE RECURRENCE OF CARCINOMA OF BREAST

BY

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John Hunter (1837) observed that recurrence of carcinoma of the breast may occur many years after removal of the primary tumour. He stated that the recurrence "is either in the cicatrix, or in the lymphatic glands. The contamination extends in some instances on the inside of the sternum, in the course of the internal mammary artery. Sometimes these consequent cancers appear long after the operation, even years." In an earlier lecture he had stated, "I have seen instances where it was years after all continuance of the cause was removed before the glands in the armpit had taken on diseased action after contamination."

There have now been a number of cases reported in which a very long interval has elapsed between mastectomy and the first recurrence. They are of interest because they show that the term "cure" in cancer therapy must be used with reservation and emphasize the importance of lifelong follow-up of treated cancer patients.

The case reported here is one in which recurrence was first observed thirty-five years after radical mastectomy. There was recurrence in the scar and there were also multiple skeletal deposits.

Case Report

In 1925, at the age of 39, she presented at Hampstead General Hospital with a swelling in the right breast which had been present for two years. There were two hard nodes in the right axilla. Biopsy of the breast tumour showed spheroidal-cell carcinoma, and a right radical mastectomy was performed (Mr. Bryan). No histological report is available on the operation specimen. No radiotherapy was given. There was some sloughing of the operation flaps, and convalescence was slow. She stated that since the operation she had had a small red area at the upper end of the operation scar. It measured about 0.5 cm. in diameter and was flush with the skin surface. She had remained otherwise very well. In 1954 it developed a scab, and in 1958 it began to increase in size. About this time she noticed pain and weakness of the right arm. When she was seen at Hammersmith Hospital in 1960, at the age of 73, there was an ulcer at the upper end of the operation scar 2 cm. in diameter (see Fig.). The walls of the ulcer were red, raised, and hard. The floor contained a thick scab. There was a 2-cm. hard fixed node in the right supraclavicular fossa.

Showing recurrence of carcinoma of breast at upper end of operation scar.

Radiographs showed multiple metastatic deposits in the ribs, pelvis, thoracic spine, and right scapula. There were degenerative joint changes in the cervical spine which were considered to be the cause of her symptoms.

Biopsy of the ulcer showed infiltration of the dermis with malignant cells consistent with a metastasis from a primary carcinoma of the breast.

Discussion

There are a number of possible explanations here. This might be a new primary carcinoma arising in breast tissue that had been left behind at operation. This was thought unlikely, as no obvious breast tissue was present and the recurrence was actually on the operation scar. This might be a metastasis from a second primary carcinoma hidden in the opposite breast or in another part of the body, but there was no evidence of this on careful examination. The other possibility was that cancer cells had remained at the site of recurrence since operation, being dormant until 1958. This seemed to be the more likely explanation, especially as the patient stated that a small red spot had been present at the site of recurrence since the original operation. No illness or incident had occurred around the time that the lesion started to increase in size.

Fifty-eight cases with recurrence of breast cancer more than fifteen years after the initial operation have been collected from the literature and are presented in Table I.

As early as 1876 Boeckel reported a recurrence 29 years after mastectomy. The first cases in the British literature were published in 1887 by Bryant (recurrence after 25 years) and by Smith (recurrence after 19 years).

The longest period was reported in 1932 by Chauffard. He states that "several red violet nodules, doubtlessly cancer," appeared in the mastectomy scar 50 years after operation. The patient died of pneumonia several months later. No mention is made of histological or post mortem findings. Hartmann in 1942 described local recurrence after 46 years, but no details were given. Davidson and Ratcliffe (1946) published a detailed case report of a woman who had a bilateral mastectomy for bilateral breast cancer. This was followed 40 years later by metastatic deposits in the left supraclavicular lymph nodes. The patient died three years later. At necropsy there was no evidence of a new primary carcinoma and the lymph-node metastases were histologically compatible with breast carcinoma. Cade quotes a case in

which first evidence of recurrence appeared as a parasternal deposit 40 years after radical mastectomy.

Table II shows the site of the first recurrence in this series. Of the 13 cases with distant metastases as the first recurrence, only five are reported to have had a post mortem examination by which a second primary carcinoma was excluded.

Post-operative radiotherapy was given to 4 cases out of the 58. One of these, however, had what to-day would be considered to be an inadequate dose. Many of the patients in this series had their mastectomy at a time when routine post-operative radiotherapy was not practised.

TABLE I.—*Reported Cases of Carcinoma of the Breast Which Have Had Their First Recurrence Fifteen or More Years After Mastectomy*

Recurrence (Years after Mastectomy)	Author	Date of Publication	Site of Recurrence ?=Not Stated	Histological Examination Primary/Secondary ?=Not Performed
50	Chauffard ..	1932	Mastectomy scar	?
46	Hartmann ..	1942	"	?
40	Davidson and Ratcliffe ..	1946	Lt. supraclavicular fossa	+ / +
40	Cade ..	1950	Parasternal	?
35	Sutton ..	1960	Mastectomy scar and skeleton	+ / + spheroidal cell
34	Daland ..	1945	Mastectomy scar	?
32	Danckers <i>et al.</i> ..	1960	Parasternal	? / + scirrhus
32	Lewis and Rienhoff ..	1932	Liver	?
31	Morton and Morton ..	1953	Skin of axilla	? / +
31	Bohlig ..	1955	Brain	?
31	Bowly, cited by Gordon-Taylor ..	?	?	?
31	Steward, cited by Gordon-Taylor ..	1925	?	?
30	Gordon-Taylor ..	1939	Pelvis	? / +
30	Cade ..	1950	Parasternal	?
30	Heurtaux ..	1899	Mastectomy scar	?
30	Verneuil ..	1888	"	+ / + scirrhus
29	Boeckel ..	1870	"	?
27	Perry ..	1948	Pleura, mediastinum	+ / ?
25	Bade ..	1946	Lymph nodes of neck	?
25	Bryant ..	1887	Mastectomy scar	?
25	Matas, cited by Ransohoff ..	?	"	?
23	Gordon-Taylor ..	1939	"	?
23	Potherat ..	1909	Parasternal	+ / +
22	Bade ..	1946	"	?
22	Gordon-Taylor ..	1939	Mastectomy scar	?
22	Richard ..	1942	Humerus, same side	? / +
21	Gordon-Taylor ..	1939	Mastectomy scar	?
21	Haagensen ..	1956	Pleura, lung	+ / +
21	Monod ..	1942	Axilla, same side	+ / +
20	Bohlig (3 cases) ..	1955	"	?
20	Ransohoff ..	1907	"	?
20	Ficarra ..	1952	Generalized	? / + adenocarcinoma
20	Haagensen ..	1956	Supraclavicular fossa, same side	+ / +
20	Lewis and Rienhoff ..	1932	Mastectomy scar	?
20	Mitchell ..	1952	"	+ / + adenocarcinoma
20	Ransohoff ..	1907	Mastectomy	+ / + scirrhus
19	Bull, cited by Ransohoff ..	?	Generalized	?
19	Hartmann ..	1942	Vertebrae	?
19	" ..	1942	Mediastinum	?
19	Joseph ..	1951	Contralateral axillary node	? / +
19	Smith ..	1887	Mastectomy scar	+ / ?
17	Coley, cited by Ransohoff ..	?	"	?
17	Gordon-Taylor (2 cases) ..	1939	Mastectomy scar	?
17	Powers ..	1910	"	+ / + scirrhus
17	Wawro ..	1954	Parasternal	+ / +
16	Arnsperger ..	1905	Mastectomy scar	?
16	Gordon-Taylor ..	1939	"	?
16	Hartmann ..	1942	Parasternal	?
16	" ..	1942	Ovary	?
16	Morton and Morton ..	1953	Axilla, skin of shoulder, same side	+ / +
16	Nunn ..	1899	Mastectomy scar	?
16	Uffreduzzi ..	1930	"	+ / +
15	Chilko and Quastler ..	1942	Mediastinum, pleura	+ / + medullary carcinoma
15	Huguenin and Gillet ..	1938	Mastectomy scar	+ / + scirrhus
15	Hartmann ..	1942	Lung	?

TABLE II.—Site of First Recurrence in 58 Patients with Late Recurrent Breast Carcinoma

Mastectomy scar	..	..	..	..	22 (38%)
Parasternal region	..	..	..	..	7 (12%)
Regional lymph nodes	..	..	..	..	7 (12%)
Distant metastases	..	..	..	..	13 (22.5%)
Pleura, lung, and mediastinum	..	..	..	..	5
Bone	..	..	..	..	3
Brain	..	..	..	..	1
Liver	..	..	..	..	1
Ovary	..	..	..	..	1
Generalized	..	..	..	..	2
Not stated	..	..	..	..	9 (15.5%)

Histological examination of both the original tumour and the recurrence was reported in 15 cases. In two cases the primary tumour alone was examined and in six cases the recurrence alone. In 35 cases no mention was made of histological examination. Of the nine cases given a histological label, five were described as scirrhous.

Now that the average expectation of life is increasing it seems reasonable to expect that similar cases of late recurrence will be met more frequently.

Summary

A case history is presented of a patient in whom widespread metastases from a carcinoma of the breast were first observed 35 years after radical mastectomy.

Similar cases in the literature are reviewed.

I wish to thank Dr. P. B. Woodyatt for permission to publish details of this case.

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Dr. UNA PORTER, senior psychiatrist at the Queen Victoria Hospital, Melbourne, and her brother, Mr. ALEC CATO, chairman of a manufacturing company and a chain of grocery stores, have offered the University of Melbourne £A.100,000 towards the cost of establishing a chair of psychiatry. Dr. Porter said she felt that a psychiatric chair was one of the university's urgent needs because medical studies were incomplete without it.

DESMOID TUMOUR OF CHEST WALL

BY

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Desmoid tumour (syn. desmoma; desmos-band) is a term applied to a general class of hard fibromas usually arising in the aponeuroses of the rectus abdominis muscle. Some 80 to 90% of cases occur in parous women, and this explains why injury is the generally accepted aetiological agent in the production of this type of lesion. In a few cases growths have appeared at the site of operation scars or after injury, but similar tumours were described in children of both sexes (Stout, 1954) and in cases where there does not appear to have been any pre-existing injury (Booher and Pack, 1951), and therefore there is still some doubt about their true aetiology.

Desmoid tumours occur as non-encapsulated nodular masses. In structure they vary from a hard acellular fibroma, relatively avascular, to the more cellular type which histologically resembles a well-differentiated fibrosarcoma. They exhibit infiltrative properties and produce atrophic changes in the tissues involved in the growth, but they are not malignant: metastases or sarcomatous changes have not been recorded, though recurrence after incomplete excision is not infrequent, especially in the more cellular type. Pagett called them "recurrent fibroids" (Boyd, 1947). Large desmoid tumours tend to degenerate, developing mucoid and cystic changes (Willis, 1948).

Extra-abdominal desmoids are rare: only a few reports have been published of their occurrence in the thoracic wall (Pearman and Mayo, 1942; Wiper and Miller, 1946; Musgrove and McDonald, 1948; Carty, 1954; Gatchell, Clagett, and McDonald, 1957; Nickell, Kittle, and Boley, 1958).

The cases reported here are, we believe, the first two thoracic desmoid tumours diagnosed and reported in this country.

Treatment is based on adequate surgical excision, although attempts have been made to treat them with antifibromatogenic hormones and x-ray therapy.

Case 1

A 54-year-old housewife was admitted to hospital in April, 1957, with a history of haemoptysis of two days' duration two years prior to admission, and another one a month prior to admission. She attended the chest clinic, where a radiograph revealed a round opacity in the lower zone of her right hemithorax. She had recently lost some weight and complained of cough. She has always been a heavy smoker. She had seven children, and all the deliveries, in her opinion, were difficult, the last one 14 years ago. She had a uterine prolapse operated on nine years before admission and has had extensive varicose veins on both legs for many years. Twelve months prior to admission she fell over a bicycle and heavily bruised the right side of her body, particularly her chest.

Physical examination revealed no abnormality except that there seemed to be diminished air entry over the right lower lobe and an area of dullness. There were no palpable glands anywhere.