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.

Routine Laboratory Examinations.—Sputum: negative for tubercle bacilli. Urine: occasional leucocytes, no pus or casts; moderate growth of coliforms. Blood picture: R.B.C., 4,820,000/c.mm.; Hb, 14.35 g./100 ml.; Hb, 92% (Haden scale); colour index, 0.95; P.C.V., 41%; M.C.H.C., 35%; M.C.V., 85 cubic microns; W.B.C., 6,000/c.mm. (neutrophils 54%, eosinophils 3%, basophils 1%, monocytes 10%, lymphocytes 32%). E.S.R. 4 mm. in one hour (Westergren). Serum proteins: total 7% (albumin 4.1%, globulin 2.9%); A./G. ratio 1.41:1. Alkaline phosphatase, 14.5 units. Colloidal gold test was negative. Kunkel's test, 6 units.

Bronchoscopic examination revealed no abnormality, and the provisional diagnosis of a tumour in the right lower lobe was made. On April 11, 1957, a right thoracotomy was carried out. The chest was opened through the bed of the right fifth rib and a solid tumour 3 in. in diameter was found in the antero-lateral wall of the chest arising, as it appeared, from the intercostal muscle. The right lung was normal apart from a row of small nodules on the basal surface of the right lower lobe running towards the hilum. The tumour was resected together with the adjoining segments of the seventh and eighth ribs, including the intercostal structures. The chest was drained with a rubber intercostal tube and the wound closed in layers with braided nylon. The defect of the chest wall was repaired partly with a nylon darn. The drainage tube was removed on the third post-operative day, but because of an accumulation of fluid the chest was aspirated on the 10th (8 oz.; 227 ml.), the 15th (12 oz.; 340 ml.), and 22nd (20 oz.; 570 ml.) post-operative days. The patient was discharged on the 30th post-operative day with a "clear" x-ray picture and in good general condition.

She was seen at eight months and then two years later, when her general condition and radiograph were satisfactory and there was no evidence of a recurrence anywhere.

Pathology.—The gross surgical specimen consisted of a hard ovoid mass, unencapsulated, with a few muscle fibres attached to one edge and a small dark nodule at one end. The tumour was rubbery in consistence, the cut surface presenting interlacing bands of fibrous tissue giving a "whorled" appearance. Microscopically the bulk of the tumour was made up of dense wavy collagenous strands in which the cells were very sparse: there were no giant cells or mitotic figures present. The muscle fibres at the edge of the tumour were in the process of being engulfed by the fibres of the tumour, and showed varying degrees of degeneration. The small nodule consisted of collapsed haemorrhagic lung tissue infiltrated with inflammatory cells.

Case 2

A 49-year-old housewife, of a nervous type, was admitted to hospital in September, 1958. About eight months prior to admission she noticed that she was very easily tired—"finished by midday." At that time she had a perineal rash said to be "due to nerves." Six months prior to admission she developed a feeling of tightness in the neck and a "burning" patch over the left side of her chest posteriorly.

A radiograph of her chest taken at the chest clinic revealed a round peripheral opacity in the right hemithorax, in close relation to the sixth and seventh ribs. On admission she complained of recurrent pain in that area and also an ache in the left parasternal area. She had had two normal deliveries and both children were then alive and well. Twenty years ago she had an appendix removed and recently a ganglion from her right wrist. On careful questioning she revealed that about six years before admission she had a bicycle accident, as a result of which she heavily bruised the left side of her face and left shoulder. Physical examination revealed a blood-pressure of 250/140, otherwise there was no abnormality in any system.

Laboratory Examinations.—Sputum: negative for tubercle bacilli and malignant cells. Culture resulted in a small growth of non-haemolytic streptococci and a heavy growth of *Proteus vulgaris*. Urine examination showed an occasional leucocyte, otherwise no abnormality. Blood picture:

R.B.C. 5,100,000/c.mm.; Hb, 14.51 g./100 ml.; Hb 93% (Haden scale); colour index, 0.91; P.C.V., 44%; M.C.H.C., 33%; M.C.V., 86 cubic microns; W.B.C., 4,400/c.mm. (neutrophils 53%, eosinophils 5%, basophils 0%, monocytes 8%, lymphocytes 34%). A few atypical plasma cells were present. E.S.R. 7 mm. in one hour (Westergren). Serum proteins: total 6.7% (albumin 4%, globulin 2.7%); A./G. ratio 1.48:1. Alkaline phosphatase, 8 units. Colloidal gold test was negative. Kunkel's test, 6 units.

On October 7, 1958, an incision was made along the sixth rib. The pleura was found normal and therefore the chest was not opened. A lobulated tumour (2 by 1½ in.; 5 by 3.8 cm.) was found arising from the sixth intercostal bundle closely related to the adjoining ribs. The portions of the sixth and seventh ribs and the tumour were then resected and the wound was closed with nylon. The post-operative course was quite uneventful and the patient was therefore discharged home on the 11th post-operative day. Three months later she was readmitted with a discharging sinus in the thoracotomy wound which developed two weeks before readmission as a painful swelling along the wound. The sinus discharge revealed staphylococcal infection. The wound was then explored, and superficially infected tissues were excised. She was discharged home in good general condition with the wound completely healed nine days later.

Four months later she was readmitted again because of persistent pain over the area of the thoracic scar. A left thoracotomy was then performed, and it was found that the bone regenerating from the ends of the sixth and seventh ribs involved the intercostal nerve. The chest was opened. Parts of the sixth and seventh ribs, including the regenerating bone and intercostal nerve, were resected and the wound was closed with catgut and nylon. She was discharged home a month later in satisfactory general condition.

Pathology.—This tumour was ovoid in shape, measuring 2 by 1½ by ½ in. (5 by 3.8 by 1.3 cm.), with muscle attached to the deeper side and resting in a smooth eroded cavity in the rib. The tumour had no true capsule, the smooth surface in contact with the rib consisting of fibrous tissue merging into the rest of the tissue. It bulged when cut, the surface presenting a glistening appearance with faint brownish-yellow septa, dividing the tumour into smooth lobules. The microscopical appearance was that of interlacing strands of dense fibrous tissue: moderately cellular, the cellularity varying in different parts of the tumour. Some of the individual cells were plump, but the majority were typical spindle cells. No giant cells or mitotic figures were seen. The skeletal muscle attached to the tumour was diffusely infiltrated by strands of fibrous tissue. The muscle bundles and fibres showed various stages of degeneration as evidenced by swelling, loss of striation, and decrease in the number of nuclei. A few normal nerve bundles were present in the loose tissue surrounding the tumour. The rib showed no gross histological changes.

Examination of the tissues removed at the second operation disclosed the following conditions: (a) A nodule at the peripheral end. This showed regenerating bone and cartilage with a tumour mass similar in histological appearance to the original tumour, infiltrating bone, cartilage, and muscle, the latter showing the same degenerative changes as previously described. A few small giant cells were present, especially in those parts adjacent to the cartilage. Some nerve bundles were entangled in the heterogeneous mass. The tumour was moderately cellular and vascular. (b) Spinal end: dense fibrous tissue with a few degenerating muscle fibres. (c) Tissue adjacent to the periosteum: dense acellular interlacing collagenous fibres.

Discussion

In the above two cases the tumours conformed to the accepted pattern of a desmoid tumour. They consisted mainly of interlacing bundles of fibrous tissue infiltrating into the adjacent structures and producing atrophic

changes in these tissues. Case 1 represents the acellular type, and Case 2 the more cellular type which recurred probably as the result of incomplete resection in the first instance. Neither case showed histological evidence of sarcomatous change, and so far there has been no evidence of metastases. There was a history of previous injury in both cases, but the women were past the climacteric. It may be that hormone disturbances bore some relation to development of the tumours.

Summary

Two multiparous women were operated on for a solid tumour in the chest wall. There was a history of injury in both cases, and histological examination of the resected specimens revealed a desmoid tumour arising from the intercostal tissue. The tumour was resected with the adjoining portion of the chest wall, and no recurrence had occurred in 24 and 12 months later respectively.

This paper is published because we believe that these are the first two cases of desmoid tumour of the chest diagnosed and reported in this country.

We thank Mr. B. B. Milstein and Mr. R. Rowlandson, the thoracic surgeons, for permission to report their cases.

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Medical Memoranda

A Case of Amoebic Brain Abscess

Since Morehead's (1838) original observation of a brain abscess associated with tropical liver abscess and the demonstration by Kartulis (1904) of amoebae in the brain, amoebic brain abscess has been recognized as a rare complication of amoebiasis. Orbison *et al.* (1951) were able to collect 83 reports of the condition, of which the diagnosis was authenticated by the demonstration of amoebae in the lesions in 22. To these they added five cases, in three of which amoebae were found. Since then at least four further cases have been reported (Koshy, 1950; de la Maza and Guzman, 1953; Kirk, 1956; Lenshoek *et al.*, 1958), in three of which amoebae were found in the cerebral lesions. Of this total of 92 cases, only 10 were presumed to have been unassociated with lesions in the liver or lung, and only five of these were proved by the finding of *Entamoeba histolytica* in the brain abscess.

CASE REPORT

An African man aged 35, previously in good health, complained that on waking, four hours before admission, he felt numbness of the right side of the body. On getting out of bed he was unable to walk because of right-sided weakness. He also noticed involuntary movements of the right hand.

On examination his temperature was 99° F. (37.2° C.). He was mentally normal. There was weakness of the right arm and leg, and the right knee-jerk was brisker than the left. Involuntary supination and pronation of the right hand was present. There were no other abnormal physical signs. The C.S.F. findings were: pressure, normal; cells, absent; globulin, increased; protein, 200 mg./100 ml.; chlorides, 720 mg./100 ml., sugar, 92 mg./100 ml.; culture, sterile. Blood and C.S.F. Wassermann reactions were negative. A provisional diagnosis of cerebral thrombosis was made. There was little change in the patient's condition until the third day, when his temperature rose to 102° F. (38.9° C.), and he began to pass dysenteric stools in which trophozoites of *E. histolytica* were found. With the possibility of brain abscess in mind, treatment was begun with emetine, chloroquine sulphate, diiodohydroxyquinoline, and tetracycline. A further lumbar puncture showed: xanthochromic fluid under normal pressure; 48 lymphocytes and 80 polymorphonuclears per c.mm.; globulin, markedly increased, protein, 400 mg./100 ml.; chlorides, 700 mg./100 ml.; sugar, 86 mg./100 ml.; culture, sterile.

The patient's dysenteric symptoms improved, but the hemiparesis became more severe. On the sixth day he became stuporous. Cerebral angiography was then done. This showed distortion and displacement of the left internal carotid artery. The vessels were stretched and filled poorly. The displacement indicated a space-occupying lesion in the temporo-parietal region. Death occurred eight hours after angiography.

Necropsy was done approximately 20 hours after death. Significant pathological findings were noted in the brain, caecum, and rectum.

Brain.—A localized yellow exudate was found in the leptomeninges of the left parietal lobe. On removing the brain, rupture of part of this region occurred, and thick yellowish-green material escaped. Coronal section through the cerebrum showed a large left parieto-temporal abscess containing thick yellowish-brown exudate. Strands of necrotic brain tissue were present in the cavity, which extended from about the midline to the lateral wall of the cortex, perforating it in one area. The left lateral ventricle was compressed and displaced medially. The abscess wall was ragged and yellowish-grey in colour (Fig. 1), while the surrounding brain showed areas of haemorrhage but no signs of a limiting membrane. These features suggested an amoebic brain abscess. A wet preparation of the abscess contents, examined at the Amoebiasis Research Unit, disclosed numerous motile *E. histolytica*. Microscopical examination of sections showed a central area of necrosis, surrounded by neutrophils, lymphocytes, and mononuclear cells, in which amoebae were present (Figs. 2 and 3). The surrounding brain tissue showed haemorrhage and necrosis but no evidence of repair.

FIG. 1.—Portion of cerebrum showing ragged surface of abscess wall.

Large Intestine.—The caecum showed two ulcers about 1 cm. in diameter with undermined edges. Two small nodules having minute openings and containing yellow exudate were present in the rectum. Though the condition was macroscopically typical of amoebic ulcers, microscopical