Case 8.—A fishmonger aged 35 first attended hospital on November 5, 1949, with a swelling of the right forefinger. There was some axillary adenitis. On October 31 his forefinger was painful and seemed "inflamed" (red) on the dorsum of the distal phalanx. There was no noticeable skin trauma. The next day there was some improvement, which continued until November 4, when the right forefinger became very painful, red, and swollen in appearance. He had kept at his work all this time. The usual course of 300,000 units of procaine penicillin with local antiphlogistine was given for five days, when the condition completely cleared.

Comment

Three well-defined clinical categories of *Erysipelothrix rhusiopathiae* infection in human beings have been described: (1) the localized cutaneous form (erysipeloid of Rosenbach); (2) a severe generalized cutaneous form; and (3) a septicaemic form with or without cutaneous involvement (Klauder, 1944).

Bacteriological proof of the infection can be established by "the microscopical demonstration of the organism in the lesions or blood and its cultivation from these sources" (Browning and Mackie, 1949).

In view of the ease in diagnosing the condition clinically, biopsy of the lesion is not justifiable. Herman (1946) rightly pointed out that the condition may be mistaken for a septic arthritis, for the maximum tenderness seems to centre around the interphalangeal joints. This tenderness in the region of the joints has also been commented upon by King (1946). Another characteristic of this condition is the spread of the erythema up one finger across the web, usually on the dorsal aspect of the hand, and then down the adjacent finger (Dolton, 1946).

Constitutional upset is very seldom seen and was not present in any of the eight cases recorded here, although glandular enlargement may occur and sometimes a mild lymphangitis. Sequeira, Ingram, and Brain (1947) attribute constitutional upset and the occurrence of lymphatic-node involvement and lymphangitis to any secondary infection which may accompany the initial inoculation with the *Erysipelothrix rhusiopathiae*. This fact would appear to be borne out by the first of the five bacteriologically confirmed cases described by Barber *et al.* (1946). Here the "response of the lymphangitis to sulphamezathine (sulphadimidine) suggested that some other organisms were responsible, as the erysipeloid itself was so strikingly unaffected by the sulphamezathine."

Suppuration nevers occurs, no matter how long the case may go without treatment. This important point should be borne in mind, for many an unwary house-officer may be tempted to incise the lesion at its most painful spot without any benefit accruing.

Erysipeloid is a self-limiting disease, and varying periods have been given for the length of time it may run its course before fading out if no treatment is given: seven days to eight months by Klauder (1938), and one to six weeks by Sequeira *et al.* (1947); and Stiles (1947) records a case of chronic erysipeloid of nine years' duration which was eventually cured by penicillin.

Cases 1 and 3 relapsed after an inadequate period of treatment. This feature of relapse and recurrence of the erysipeloid has been stressed by all writers on the subject, and confirms that no immunity is conferred by the first attack of the condition.

A notable feature was that six out of the eight cases were seen within five weeks, from September 28 to November 5, 1949. King (1946) has suggested a seasonal incidence for erysipeloid, with a predominance of the condition in the autumn, when swine erysipelas is more prevalent in England, and flies may be a vector of the disease. The time of occurrence of the cases here recorded would tend to substantiate his claim.

Treatment

Treatment is essentially medical and penicillin is without doubt the choice. The sulphonamides are ineffective against this condition (Klauder and Rule, 1944), and serum therapy is not certain and is open to the objection that the patient is very liable to serum sickness. The earliest reports of penicillin treatment in human infection with erysipelothrix are those of Hodgson (1945) and Barber *et al.* (1946). I have found that 300,000 units of procaine penicillin given daily by intramuscular injection for at least five days will cure the lesion.

It must be stressed that for penicillin to be effective treatment must be adequate and prolonged. This conclusion was also reached by Bush (1949), Lowden (1949), and Erskine (1949). Local treatment may be given in the form of antiphlogistine and resting the arm in a sling.

I wish to thank Dr. J. M. Greenwood, medical superintendent Withington Hospital, for permission to publish these cases.

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CORACOCLAVICULAR JOINT

A RARE CONDITION TREATED SUCCESSFULLY BY OPERATION

BY

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Anomalous joints between the clavicle and coracoid processes are occasionally reported as anatomical or radiological curiosities, and I have been able to trace 54 in the world literature, including one in this country. Of these, 49 are non-surgical cases, noted on skiagrams or at necropsy, three are recorded by Myer (1915–16), and two have required operation for relief of severe pain developing at the age of 34. The case recorded below has a similar age incidence, at 38.

Case Report

This patient, a talented organist aged 40, had undertaken fairly long hours of clerical work in recent years. He first developed symptoms two years ago, the earliest sign being faint "pins-and-needles" in the fingers of the right hand and later the type of numb feeling associated with pressure of the arm over the back of a chair. At first the attacks were spaced several weeks apart. Later an ache developed in the middle of the extensor surface of the forearm and later still in the middle of

the flexor aspect. Another symptom, which still persists slightly, was the loss of power of full and rapid pronation and supination required for playing fast and elaborate piano pieces. Analgesics gave little relief, but some improvement occurred after large doses of vitamin B_1 by mouth. A complete remission occurred from January to July, 1948, only to be followed by almost continuous pain in the forearm, worse on the ulnar side. In addition his head began to be pulled downwards and forwards, and lifting the chin or pulling it back caused pain in the right axilla. Pain was lessened by exercise and made worse by rest.

Examination.—Except for some limitation of abduction, physical signs were entirely absent. No tenderness could be elicited along the clavicle, nor could any abnormality be felt, even when the abnormal joint had been demonstrated by skiagrams (Fig. 1). These, taken in September, 1948, showed the

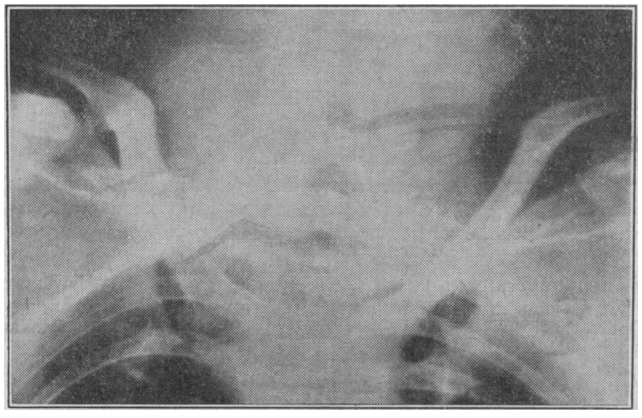

FIG. 1.—Before operation. Showing normal left clavicle and abnormal right clavicle.

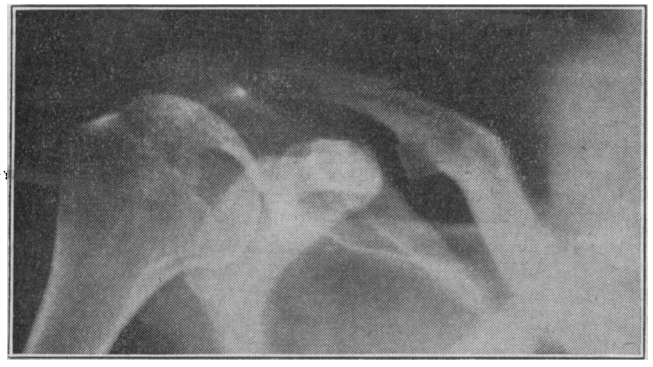

FIG. 2.—Before operation. Showing the abnormality of the right clavicle in greater detail.

anomalous articulation on the right side about the junction of the outer and middle thirds of the clavicle, the left side being completely normal (Fig. 2). In view of the rapidly increasing disability, operation was advised. At that time I had not been able to trace any comparable case in the literature, so that a special approach had to be devised. Stereoscopic radiographs showed the clavicular exostosis to be infero-posterior to the clavicle, and, as already noted, it could not be palpated externally. A fellow surgeon whom I consulted advised temporary dislocation of the acromio-clavicular joint to ensure the safety of the underlying brachial plexus and subclavian vessels; but this, involving the division of the deltoid muscle as well, seemed too destructive a technique for a patient of such marked artistic abilities. Although his neck was large and his shoulder massive, it was thought that sufficient access might be obtained through the clavicular part of the pectoralis major, and this route was eventually chosen.

Operation.—Under general anaesthesia, with the head rotated away from the affected side, a linear incision was made along the middle third of the clavicle, later extended towards the acromion process. After a careful dissection underneath the clavicle the abnormal joint was found to be further out than was expected, and only a narrow triangle could be obtained for operative access. The soft tissues, including fibres of the pectoralis minor muscle, were cleared from the anterior surface of the exostosis by blunt dissection. With the index finger of the left hand behind the abnormal joint to guard against accidental damage to the deeper tissues, an osteotome was applied to the base of the clavicular outgrowth and given gradually harder hammer blows by my assistant till a clean split was obtained. It was just, and only just, possible to obtain the necessary angulation for the osteotome. After about a dozen taps the separated piece of abnormal bone was twisted out with lion forceps. The under surface was seen to be well lined with articular cartilage. The coracoid process, lying deeply in a deposit of fat and connective tissue, was left alone and the operation was completed by suture in layers.

Progress.—Convalescence was uneventful except for some serous discharge from the inner end of the wound, probably due to too liberal a dusting with penicillin and sulphathiazole powder. Movements of the arm and hand were encouraged from the start, and no restrictive bandages were placed on the shoulder. The patient was allowed up from the day of operation, and found himself free from the original pain when he recovered from the anaesthetic. Ten days later he was playing brilliant passages on the ward piano, and a few days afterwards he was able to play complete oratorios on various church organs. Fig. 3 shows the condition after operation. Eighteen

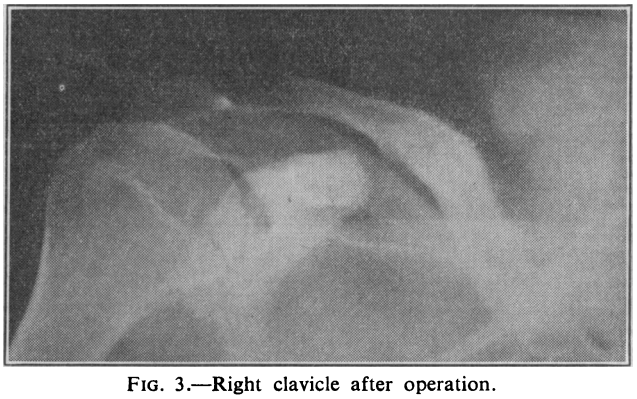

FIG. 3.—Right clavicle after operation.

months after operation he is free from pain, but still finds slight limitation of rapid twisting movements of the right forearm. He also says, quite unaccountably, that his pedal work is not as good as before.

Discussion

Two previous surgical cases are recorded, the last by Dr. Gustavo Wertheimer (1948), of Brazil, who also describes a similar case treated by del Valle and Giordano (1943), in the Argentine. The first was that of a male negro of 37 with a three-year history of shoulder-joint pain, later radiating to the left arm, persisting during rest, and increasing with exercise. The second patient, a white woman of 35, had pain in her left shoulder for one year, radiating to the breast, neck, and left arm. The pain became steadily worse and was not relieved by analgesics. The maximum intensity persisted at the site of the abnormal joint. Occasional symptoms included itching of the last four fingers, followed by transient paralysis of the hand. Both cases obtained complete relief from operation, which consisted of excision of the anomalous joint by osteotomy through the deltoid muscle after wide exposure of the pectoralis minor and coracobrachialis. Most of the other cases have been symptom-free throughout, but Frasseto (1921) records a bilateral case in which fracture of the surgical necks of both humeri recurred in two falls, the abnormal fixation of the clavicle no doubt being a contributory factor.

Arthritis in one of these joints has been described by Timpano (1934) in a workman of 63.

It is interesting to note that the three surgical cases were symptom-free until their ages reached 38, 34, and 34 respectively, and that the pain became rapidly worse and intolerable, being completely relieved by removal of the joint or the clavicular outgrowth. The aetiology of the pain is most obscure. Del Valle and Giordano (1943) ascribe it to a sympathetic or plexal origin due to compression of microscopic nerves, which are relieved by removal of the anomalous joint. Arthritic changes and joint degeneration are considered to be causal factors, and the joint is certainly in very close proximity to the main trunks of the brachial plexus, although it is difficult to see how these could be affected by pressure from a closed joint.

Lastly, a practical point. The skiagram was misleading, and it was not realized that the clavicular outgrowth actually articulated with the coracoid process until it was found that lifting the arm above the shoulder gave no improvement in operative access. Shortly afterwards, of course, an actual joint, lined with articular cartilage, was demonstrated.

I am very grateful to my colleagues, Mr. C. S. Milne and Dr. T. J. Shields, for their invaluable help in exploring the literature of this case.

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Medical Memoranda

Recovery from a Ruptured Mycotic Aneurysm

In reporting this case we recognize the fact that a diagnosis of subacute bacterial endocarditis was not established beyond dispute by a positive blood culture. However, we think that readers will be in little doubt about the nature of the underlying pathology, and if our diagnosis is accepted on clinical grounds this case would seem to be unique. We have read of one similar case surviving the rupture for two and a half weeks only.

CASE REPORT

A girl aged 15 was brought to the out-patient department by her mother on November 4, 1948, with the history that she had been losing weight, colour, and energy ever since a tonsillectomy in the preceding January. According to her mother she had "gone an awful colour" and would not leave the house or show interest in anything. She had been having pains in her knees and ankle-joints, and a sharp intermittent substernal pain, both on exertion and at rest. She denied having chilly feelings, sweats, painful nodes on her fingers, etc. Her previous illnesses consisted of scarlet fever followed by rheumatic fever at the age of 9, further attacks of rheumatic fever at 12 and 13, and acute rheumatism at Christmas, 1947. During none of these attacks had she suffered in health to the extent that she had recently.

On examination she was seen to be a tall thin girl, with a café-au-lait discoloration of the skin. Her pulse rate was 120 and regular, and her blood pressure 125/75. The apex beat was displaced slightly to the left and auscultation revealed a well-marked mitral regurgitant murmur. There were no signs of congestion of the lung bases or liver, and no oedema. The spleen was not palpable, and her fundi oculorum showed no abnormal changes, but there were fairly numerous petechial haemorrhages on the trunk, especially on the flanks. Both knee-joints were tender and contained fluid. She was admitted to hospital on November 10.

Special Investigation.—A blood count showed: haemoglobin 75%; red cells, 4,700,000; colour index, 0.8; white cells. 9,000 (polymorphs 85%, lymphocytes 11%, monocytes 4%). E.S.R., 40 mm. (Wintrobe). Urine: no red blood cells or other abnormalities were found in the centrifuged deposit on repeated occasions. Blood culture on three consecutive days was sterile after 48 hours. A radiograph of the chest revealed nothing abnormal. It was decided to start treatment with penicillin without delaying any further in the hope of obtaining a positive blood culture, and 250,000 units were given six-hourly for 50 days.

On admission and for 48 hours after starting the penicillin her temperature was remittent between 101 and 99° F. (38.3 and 37.2° C.). Her pulse during this period varied between 110 and 130. From then onwards until December 5 her temperature rose only to 99° F. or less in the evenings and her pulse was 110. During the early hours of December 4 she awoke with a severe headache, vomited, and later became unconscious. There were a left-sided hemiparesis at the onset and neck rigidity. The depth of unconsciousness gradually deepened.

Lumbar puncture showed a pressure of 245 mm. and a heavily blood-stained fluid. During the next few days head retraction was most pronounced. Haemorrhages appeared around the optic disks.

Her temperature was considerably elevated during this phase of her illness, but had settled to about normal by December 11, and rose only on occasion after this.

Recovery was gradual. By December 14 she had regained normal clarity of consciousness, but there was still marked neck rigidity. By December 17 the C.S.F. was reported as being xanthochromic and containing 200 cells per c.mm.—50% red blood cells, 50% lymphocytes.

On December 30 she sat in a chair for the first time, and was discharged home to a convalescent regime on January 4, 1949. At this time her weight was 7 st. 8 lb. (48 kg.), haemoglobin 90%, and E.S.R. 14 mm. (Wintrobe).

She has attended the out-patient department regularly since discharge. On her last visit (July 5) she looked in perfect health, was leading a normal life, and was helping her parents in their business. Her weight was 8 st. 10 lb. (55.3 kg.), haemoglobin 94%, and E.S.R. 8 mm. (Wintrobe). The only abnormal physical sign was her mitral murmur.

Her last attendance was on December 6, 1949, when she was free of symptoms and her weight was 9 st. 3½ lb.

COMMENT

The discursive element of this case revolves around the diagnosis. This girl had a subarachnoid haemorrhage either from a mycotic aneurysm or from a congenital (Berry) aneurysm. In the former case her serious decline in health, the petechial haemorrhages, and the valvular lesion can be satisfactorily correlated. In the latter, these significant facts must be attributed to the rheumatic process complicated by a second pathological process. We consider the former diagnosis much the more probable.

Numerous reports have appeared in the medical press concerning the results of treatment of bacterial endocarditis with penicillin. Paul, Bland, and White (1947) report the case of a man who succumbed to congestive cardiac failure two and a half weeks after a subarachnoid haemorrhage. At necropsy, in addition to subarachnoid and intracerebral haemorrhage, it was found that rupture of a chorda tendinea of one leaf of the mitral valve had taken place. These authors report the case of another patient who died from subarachnoid haemorrhage at the end of a course of treatment. Cultures of the involved valve and the blood were negative.