CERVICAL RIB AND HYPERHIDROSIS

BY

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The usual signs that a cervical rib is causing trouble are pain and muscular weakness. It is also generally recognized that in some instances there are vasospastic phenomena which may lead to gangrene of one or more fingers.

A consequence of cervical rib which is not so widely known is hyperhidrosis of the hand; the sweating here may be profuse and very troublesome. In a series of 92 patients on whom I have operated for symptoms of cervical rib there were 81 of the common textbook type. Of the remaining 11 cases, 5 were examples of pressure by a normal first rib, 4 showed predominantly vascular symptoms, while 2 patients complained mainly of profuse hyperhidrosis of the affected hand. Short notes of these two cases are as follows:

Case I

A housewife aged 38 had for some weeks felt an aching and weakness of the right hand, with very profuse sweating. She was right-handed, and her troubles were worse at the end of a day's work. When seen her right hand was normal in colour and temperature, but was covered with drops of sweat, which had saturated the bedclothes where the hand rested. Operation showed a large cervical rib articulating by a fibrocartilage with the first rib at the scalene tubercle. The accessory rib showed clearly the groove in which the lowest trunk of the plexus had rested. Removal of the rib was followed by a rapid and complete return to normal.

Case II

A probationer nurse aged 18 had been perfectly well while working as a typist, but within 6 weeks of taking up nursing she complained of increasing weakness of the right hand, with aching pain and troublesome sweating. She was right-handed, and the cause of her trouble was no doubt the change from a light sedentary occupation to one of physically much heavier work. A radiograph showed a small cervical rib on the right side. At operation this rib was found not to extend as far as the plexus, but was continued as a tense fibrous cord in the substance of the scalenus medius. The lowest trunk of the plexus rested on this cord, and it was seen that with each inspiration the cord became taut and pressed so hard on the lowest trunk that this structure was lifted up with each breath. Division of this fibrous cord, together with section of the anterior two-thirds of the scalenus medius, was followed by prompt and complete recovery.

Commentary

It would seem well-nigh certain that the explanation of these cases of hyperhidrosis of the hand is to be found in the irritation by the cervical rib of those sudomotor sympathetic fibres which are running in the lowest trunk of the brachial plexus. This explanation is in line with that generally accepted for the vascular complications of cervical rib.

Todd (1913a, 1913b) was the first to suggest that these vascular phenomena were the result of irritation of sympathetic fibres. Telford and Stopford (1931) carried his work a stage further by showing that in some individuals the vasoconstrictor fibres passed through the lowest trunk of the plexus as an undistributed bundle, and that this bundle lay directly upon the cervical rib. Given a patient with cervical rib who has this disposition of sympathetic fibres, then the symptoms caused by pressure and friction on the lowest trunk will be predominantly vascular in type. This explanation, although widely accepted, has been challenged by some writers who still believe that the vascular symptoms are to be explained by mechanical interference with the subclavian artery. Be this as it may, mechanical interference with the artery will not explain hyperhidrosis of the hand; whereas the view that the excessive sweating is the result of sympathetic stimulation dovetails very neatly with the explanation of the vascular symptoms.

Sudomotor and vasoconstrictor fibres are known to be intimately associated throughout their course and distribution, and if a leash of fibres containing both types be exposed to irritation by friction or pressure, the factor of their relative

position with regard to the rib will determine whether vasospasm or hyperhidrosis figures more prominently in the clinical picture.

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DESERT SORES

BY

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The following article is in no sense intended to be authoritative or academic. It is merely a collection of views acquired after treating over 1,000 patients for desert sores.

The desert sore is a chronic ulcerative condition of the skin characterized by its tendency to local extension and delayed resolution. It appears in patches of various dimensions from the size of a threepenny-piece to that of a half-crown or occasionally even larger. The ulcers may be single or multiple; the edge is usually irregular in outline. They are roughly divisible into two main types—primary and secondary.

The primary type appears as a spontaneous blister which ruptures and leaves behind a suppurating sore. The secondary type is superimposed on any slight cut, abrasion, or burn. In this connexion it is interesting to note that the skin is far more susceptible to injury in the climate of the desert. The minimum amount of trauma will invariably result in a breach of the skin surface. A not uncommon origin for a desert sore is a simple boil which ruptures and then fails to resolve. Lastly, bites due to fleas, bugs, and mosquitoes occasionally suppurate and give rise to the desert sore.

Aetiology

The aetiology appears somewhat obscure, but certain factors without doubt tend to promote the condition. When the diet is seriously lacking in fresh green vegetables or the equivalents, I have noted a marked rise in the number of sores seen. The adequate provision of a comprehensive scale of rations naturally presents many difficulties in countries such as the Western Desert, where, on the whole, the rations are exceptionally good; but now and again essentials are lacking.

Patients tend to ignore their sores and leave them uncovered in the early stages. As a result, flies, which are very prevalent, tend to spread the condition. In the same way, the contact of sand with the sores tends to make them worse. When water is short, and washing as a result is on a very primitive scale, I find that the impregnation of dirt in the skin will often give rise to blisters, which subsequently become desert sores. General ill-health is usually associated with a profusion of desert sores, but in this connexion I find it difficult to differentiate between cause and effect. Very very occasionally when cases show rapid deterioration I have seen swabbed the sores, and the Klebs-Loeffler bacillus has been found. In my series of 1,000 cases 2 proved to be due to diphtheritic infection.

The condition is almost universal among the troops in the desert, but I find that newcomers are especially susceptible. The fair-skinned men seem to show the greatest susceptibility. An interesting feature is the presence of sores among the Egyptian and Libyan natives, several of whom I have treated. Their response to treatment is no better than that of our troops.

The lesions are, in my experience, seen chiefly on the extremities, and by far the commonest site is the hand. The actual sores are difficult to classify, but I recognize four stages:

(a) A small shallow ulcer with yellow base. The edges are not inverted, but there is a distinct tendency to undermining of the edges of the skin in close proximity to the sore, where pus forms, and eventually the ulcer elongates along these new channels. At this stage the sores are usually painful and tender.

(b) The sore has reached the indolent stage. It fluctuates between partial resolution and extension, and is now usually almost painless. Pus continuously exudes from the lesion.

(c) At this stage the sore becomes flush with the surface of the skin, with exuberant granulations, a dry scab forms, and