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CAROTID PAIN: REPORT OF SIX CASES

BY

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As a presenting symptom, severe spontaneous pain felt over the bifurcation of the common carotid artery has been reported by few medical writers. Fay (1927, 1932) described that physical sign which he termed "carotidynia," tenderness along the course of the common carotid which may be elicited during an attack of atypical facial neuralgia. He used this in support of his hypothesis that in such cases headache was brought about by abnormal behaviour of the carotid tree.

The first description of spontaneous carotid pain as a symptom appears to have been made by Truffert (1948). He recorded, in a man of 38, episodes of severe pain at the level of the carotid bifurcation, sometimes radiating upwards into the face. He described a feature which is very characteristic of the syndrome, the extreme sensitiveness of the artery to the slightest pressure, so that the wearing of a light scarf would cause an intolerable aggravation of the pain. He also noticed, during attacks, the appearance of a pulsating tumour at the level of the hyoid. In the same paper two other cases were also described. In 1949 Hilger published an account of five cases similar to those of Truffert, and Riser, Dardenne, and Gleises (1949) described the case of a 78-year-old man whose carotid pain evidently fell into a clinical category distinct from the previous cases and indeed from all subsequently published cases. In this case, although bilateral carotid pain was a presenting symptom, a diagnosis of temporal arteritis was made, and was supported by biopsy.

A case of recurrent carotid pain associated with angioneurotic oedema was reported by Martorell (1955). The most recent and the largest series is that of Lovshin (1960), who analysed the case histories of 100 patients seen in two years at one clinic. Though only three detailed histories are used in illustration, he drew a vivid composite picture of the syndrome which he regarded as "a vascular headache in the neck," and he made a plea for its wider recognition. I have been unable to find any British references to this striking and singular clinical phenomenon.

The six cases described below were first seen during the period April, 1959, to June, 1961.

Case Reports

Case 1.—A married woman of 47 was sent by her G.P. to an ear, nose, and throat surgeon, complaining of a very

painful swollen "gland" in the left side of her neck. This had troubled her intermittently for seven months in about 10 episodes of between one and seven days' duration. The pain would sometimes spread up the left side of the face to the temporal and parietal region. For 12 years she had been subject to migraine, paroxysms of fronto-parietal headache lasting 48 hours, which she regarded as entirely distinct from her pains in the neck. She was a tense, anxious woman obviously in great pain. A pulsatile tumour was seen and felt on the left side at the level of the carotid bifurcation. The lightest palpation of it caused great distress. Elsewhere the vascular system appeared normal and the patient was normotensive. A slow intravenous injection of ergotamine tartrate, 0.5 mg., failed to relieve her pain or to lessen the tumour. She has been reviewed at intervals over the two-year period and has had a number of similar attacks. During this time there have been many other complaints for which no organic basis could be found. They included soreness of the eyes, low back pain, and pain on micturition. She suffered also from neurodermatitis. She gave, and continued to give, the impression of a sad, rather lonely woman in need of sympathy.

Case 2.—A married woman of 58 complained of soreness in an "inflamed gland" in the neck on the left. She had a long history of ill-health, including three nervous breakdowns of many months' duration. These appeared to have been exacerbations of a long-standing and almost continuous phobic anxiety state. She had within the previous year complained of abdominal pains which had defied diagnosis, and she had been treated by manipulation, and, unsuccessfully, for low back pain. She was a sad-looking woman with a fear of cancer. The left common carotid was readily palpable and was very tender at the level of bifurcation. There was no glandular enlargement in the neck. Her blood-pressure was 160/90.

Case 3.—A machine-tool fitter aged 51 complained of pain below the right angle of the jaw in episodes of two hours at exactly the same time every afternoon for the previous five days. He had had "a nervous breakdown" at the age of 16 and a tendency to occasional headache of short duration all his life. A well-built man of healthy appearance, he gave his story simply and without embroidery. The right common carotid was very tender at its bifurcation and pulsated more amply on this side. The fauces were healthy and there was no lymph-node enlargement. The blood-pressure was 195/100. The pain was unrelieved by intravenous ergotamine tartrate. The E.S.R. was 26 mm. in one hour. A week later there was still a complaint of occasional dull pain but tenderness was no longer apparent. Within a further week all pain had gone and the E.S.R. had fallen to 6 mm. in the hour. During the next two years he experienced occasional attacks of neck pain but was never again observed in one of these.

Case 4.—A male laboratory technician aged 40 noticed tenderness in the right side of the neck. Whenever he touched a certain point he experienced pain which shot up into the ear and side of his face. Shaving over the affected area had become intolerable for this reason, and sneezing, coughing, or slight movement of the head caused an intense pain in the neck. Five days before the onset he had contracted a sore throat and head cold. He had always regarded himself as a healthy person, although until a year before this he had suffered occasional attacks of migraine which he recognized as quite different from the pain in his neck. Examination revealed no signs of ill-health apart from extreme tenderness of the right carotid bifurcation. There was no evidence of pharyngeal inflammation nor of any gland enlargement. Within two weeks of its onset the pain cleared up and had not returned during the next 18 months.

Case 5.—A 34-year-old male medical practitioner noticed what he took to be a "sore throat" affecting the right side only. On the following day, swallowing or even yawning was very painful and the pressure of a shaving-brush was unpleasant. At this time there was some vague backache which lasted 24 hours. On the third day the pain had diminished but the common carotid artery was very tender. By the fifth day all pain and tenderness had gone. There has been no recurrence in two years.

Case 6.—A woman of 69 experienced pain in the right side of the throat, aggravated by swallowing and by turning her head to the left. She was, by personal experience, acquainted with the symptoms of acute pharyngitis; this, she said, felt quite different. During the previous week she had had a slight head cold which had cleared up before the onset of the pain. The pain had been sudden in onset, reaching maximum intensity within a few minutes. She was a person who usually enjoyed excellent health. The throat was healthy and no glands were felt. The right carotid bifurcation was very tender. Within 48 hours she was free from pain. There has been no return of pain in two months.

Discussion

Clinical Picture.—The feature common to all these case histories is a complaint of pain in one or other side of the neck and of great tenderness, usually to the lightest touch, over the corresponding carotid bifurcation. In one patient, during an attack, the carotid artery at this point was visibly swollen, and in two others the amplitude of pulsation was tangibly greater on the affected side. In Cases 1 and 3 the neck pain has been recurrent, while in Cases 4, 5, and 6 the symptom appears to have been an isolated phenomenon: the short follow-up period does not permit any such conclusion in Case 2. In two of the cases in which pain occurred as a solitary episode the onset was preceded by a head cold.

Aetiology.—"We do not know whether the pain is due to simple arterial dilatation or whether there is another factor such as sensitization of the pain nerve-endings by a chemical agent." These words, written by Sir George Pickering in 1939, referred to the cause of migrainous headache, but they are equally applicable to-day to the cause of carotid pain, and the similarity of the two problems is evident. Lovshin (1960) suggested that carotid pain and tenderness were brought about by arterial dilatation and that "vascular" neck pain is no more than a variant of "vascular" headache. This contention is supported by the spread of pain, when severe, to the face and scalp, as in Cases 1 and 4 of the present series. Case 4, where the pain occurred with clockwork precision at the same time every afternoon, is reminiscent of Bickerstaff's (1959) description of

the periodic migrainous neuralgia of Wilfred Harris. Although in two patients an intravenous injection of ergotamine tartrate failed to modify the pain, it has been shown by Torda and Wolff (1945) that prolonged dilatation of an artery will result in oedema and stiffening of the vessel wall, rendering it no longer susceptible to vasoconstricting drugs. It is, however, doubtful if any good purpose is served at the present time by the comparison of one syndrome which is barely recognized with a group of others which are barely understood, although it is worth stressing that in none of the migraine-type headaches is there that extreme arterial tenderness which is found with carotid pain and which is comparable only to the tenderness of temporal arteritis.

Prevalence.—The carotid-pain syndrome is not the rare condition implied by its scant acknowledgment in the literature of medicine. Three patients were seen at one medical clinic in little more than two years, while three others were brought to my notice by an interested colleague during the same period. The apparent rarity of the syndrome is probably due to our failure to recognize it. We cannot recognize something of which we are not already aware, and it is hoped that this paper may, by creating awareness, stimulate the recognition and study of a very singular phenomenon in vascular behaviour.

Summary

Reports are given of six patients in whom pain in the neck was accompanied by great tenderness of the common carotid artery. It is thought that this may be a common syndrome, at present seldom recognized.

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The *President's Review* from the Rockefeller Foundation *Annual Report, 1960*, shows that out of the Foundation's grants of \$32,833,971 in 1960 nearly a third (\$10,250,060) went to the medical and natural sciences. The Foundation's total income for the year was nearly \$24m. and the market value of its uncommitted principal fund at the end of the year was nearly \$470m. During 1960 234 new Fellows from 39 countries and three international organizations began advanced study, and 345 Fellows continued their work; Fellows studied at 159 institutions in 22 countries. In his review President J. G. HARRAR points out that the Foundation is placing increased emphasis on training individuals from many countries for leadership in national and international developments. A survey is given of the support the Foundation lends to work on the arthropod-borne diseases of man and his domestic animals.