Carotidynia*

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Cervical pain, localized in the area of the common carotid artery and at the level of the carotid bulb, may occur due to different causes that range from inflammatory processes and tumors in and around the artery itself, to extrinsic damage in neighboring areas such as lymphadenitis and tumors of nearby organs. There is a carotid pain that occurs quite frequently and is little known, benign in nature and gives rise to no significant lesions of the artery, which has been called Carotidynia, Carotid Arteritis, or simply Carotid Pain.

The purpose of this article is to focus attention on this benign, but frequently found disease about which little has been published and to present our clinical observations and review the treatment of forty cases. The lack of recognition of its existence has caused the disease to be overlooked by the otorhinolaryngologist, even though its symptomatology is quite evident.

Review of literature

Fay (1927) was the first to draw attention to the painful sensitivity of the carotid artery as the cause of atypical pain in the face; he described 'Fay's Sign', which is a characteristic pain that occurs upon digital compression of the area of the affected carotid artery, which often will produce symptoms that are referred to the facial area. In 1949, Hilger made a clinical study of 'Carotid Pain' and attributed it to an imbalance of the autonomic nervous system, which results in vasomotor phenomena at the level of the carotid tree. The mechanism was considered to be an angiospasm in the arteriolar system which produced an edema through vasodilatation of the larger arteries, the result being edema with no inflammation. In an article called 'Vascular Neck Pain—a Common Syndrome Seldom Recognized' Lovshin in 1960 made a clinical study of one hundred cases and, similar to Hilger, attributed the pain to a dysfunction of the autonomic nervous system which would occur in patients with a temperament similar to that found in patients suffering from migraine. Both authors granted special importance to the psychosomatic factor of this disease.

In 1962 Saunders reviewed the literature and, for the first time, mentioned the possibility of a viral etiology for this disease. He proposed

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corticosteroid treatment, but presented no series of patients to support the results of such treatment.

Other authors, including Martorell (1961), Pearse and Hinshaw (1956), have described painful and hyperpulsatile dilatations at the level of the carotid bulb, and have studied one of the excised tumors from a histopathological point of view. They found nothing more than a process of arteritis, similar to that which is to be found in cases of intracranial arteritis.

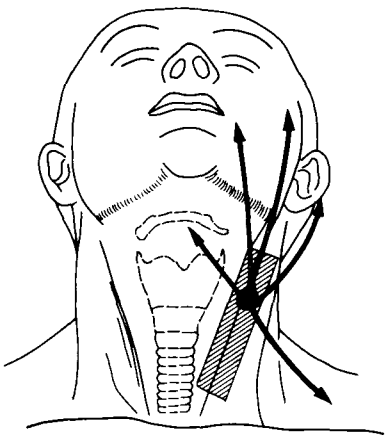


FIG. 1.

One of the most recent articles published is Roseman's in 1967. He reviews this syndrome and his clinical observations on thirty-three patients. This author insists again on the possibility of a viral etiology and analyzes the symptomatology, evolution and results of the treatment in his series. No significant results were obtained with corticosteroid treatment.

Case material

Over the last four years we have had a chance to study and observe clinically forty cases of Carotidynia. The majority of these cases were followed from the very beginning and appeared as a benign lesion, with no great alteration in the general health of the patient.

Fourteen patients were male and twenty-six were female; the greatest incidence occurred in patients between the ages of twenty and forty years, but we did see three children with the disease in a very typical form and two cases were adults over seventy (Table I). No specific preference was noted for one side or the other (Table II). Even though bilateral cases have been described, we saw none of these in our series.

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In twenty-eight of our patients, pain appeared in a moderate form, but was both continuous and disturbing. In ten cases we found such an intense pain that, when the carotid area was lightly touched, the patient jumped. Very slight tenderness upon digital compression was found in

TABLE I.
CAROTITIDYNIA

No. of cases			40
Age groups		Sex	
0–10 years	3		
21–30 ,, ..	11		
31–40 ,, ..	13	Male ..	14
41–50 ,, ..	7	Female ..	26
51–60 ,, ..	4		
61–70 ,, ..	2		

TABLE II.

Diseased side	Pain (intensity)	Local inflammation	
Right .. 21	Slight .. 2	With swelling ..	6
Left .. 19	Moderate .. 28	Without swelling ..	34
	Severe .. 10		
Pain radiation (ears, throat, face, etc.)		With radiation ..	29
		Without radiation ..	11

only two patients. In the great majority of our cases (thirty-four) there was no palpable swelling at the level of the carotid area or that of the carotid bulb, but in six cases it was possible actually to palpate a larger sized carotid bulb which had no evidence of swelling.

In almost all of our cases, the pain radiated to the ears, throat or face. This radiation was present in twenty-nine of our patients and perhaps this may be the reason the otorhinolaryngologist is so often consulted when this painful syndrome appears.

None of the patients demonstrated any changes in their general health picture and all of them were enjoying good health. Ten cases had influenza two or three weeks before the onset of the symptoms. Otorhinolaryngological examinations were normal for thirty-three of the cases and only seven presented some minor disturbances, particularly at the level of the pharynx, characterized by a discrete congestion of the mucosa. Headaches were associated in only three cases (Table III).

TABLE III.

General symptoms		E.N.T. examination	
Absent	40	Normal	33
Present	0	Minor findings	7
Previous diseases		Headache	
Yes (viral)	10	Yes	6
No	30	No	34

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Following Saunders' (1962) suggestion, we treated the majority of our patients with corticosteroids, either in pure form or combined with acetylsalycilic acid or antihistaminic drugs. An immediate and quite satisfactory response was obtained in thirty treated cases, which went all the way from a complete disappearance of all symptoms by the third day of treatment to just the persistence of a slight pain upon palpation of the carotid artery a week after the onset. A tendency to relapse was noted in five cases.

Discussion

In the light of the clinical observations of the cases studied, we favor the possibility of this benign disease at the level of the carotid artery being viral in nature, since we have been able to observe it after clinically proven viral processes as well as a certain seasonal incidence during certain periods of the year. Even though in our series the psychic factor was not sufficiently evaluated, we do not consider it highly significant since no symptoms of anxiety or of an excess of emotional stress were observed in the majority of our patients.

Almost all our cases were young people, between twenty and forty years of age, in a very good state of general health. The disease disappeared rapidly with treatment and did not cause any disturbance in the normal life of the patient.

In a great number of these patients we noted that the pain seemed to show a preference for radiation to the ear. This observation does not coincide with other authors who have found a greater incidence of radiation to the throat. In some cases a sore throat was present, with a very slight pharyngeal inflammation upon examination, which does not agree either with the observations made by other authors. One of the most frequent symptoms of which our patients complained was the feeling of weight and discomfort in the corresponding half of the face; therefore, it is important always to digitally examine the carotid bulb and the path of the common carotid artery on the affected side and to explore its sensitivity when findings in the throat, nose or larynx are absent but when there are paresthesic manifestations irradiating to the face, the ear or the throat.

Laboratory examinations, including a complete blood count and sedimentation rate are usually normal in carotidynia. The presence of a significant finding would often suggest a different diagnosis.

Differential diagnosis

Even though the diagnosis of carotidynia is quite easy in the majority of cases since the pain is clearly localized when digital compression is applied at the level of the carotid bulb and the path of the common carotid artery, other painful adenopathies along the artery may lead to

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a mistaken diagnosis. In these cases it is generally easy, by digital compression, to outline the painful swelling which does not form part of the artery and has no pulsation of its own. A differential diagnosis may also include thyroiditis, but in this condition the pain is generally well located in the thyroid gland and there are no painful manifestations around the carotid artery. Tumors of the carotid body are generally not painful and occur in the form of a pulsatile swelling that can be palpated at the level of the bifurcation of the common carotid artery. Acute submaxillary sialadenitis, since it occurs so close to the carotid bulb, may also be a cause of a mistaken diagnosis.

Treatment

Of our forty cases, we were only able to follow thirty-one (Table IV). Thirty of the latter received corticosteroids for periods ranging between five and fifteen days. Most of the patients received moderate dosages.

TABLE IV

Treatment	Results		
	Immediate improvement	No improvement	No follow-up
Steroids	17	0	6
Steroids + A.S.A.	8	0	2
Steroids + anti-hist. ..	5	0	1
Other	0	1	0
TOTAL	30	1	9

Several different corticosteroids used, including Prednisone, Triamcinolone and Dexamethasone, gave equally good results. Combinations of steroids and acetylsalycilic acid and antihistaminic drugs were used also. Satisfactory results were obtained in all the cases treated.

From this experience we have concluded that patients with the diagnosis of carotidynia and with significant symptoms should be treated with Prednisone, 10 mg. t.i.d., Aspirin Gr. 10, q 4h. and Rofeniramine, 6 mg. Repetab, b.i.d. This treatment should be maintained until the patient is free of symptoms. Should symptoms return after treatment has been discontinued, a second course of therapy will usually be successful.

Summary

Carotidynia is a benign and relatively common condition, characterized by pain in the neck and extreme tenderness of the carotid artery and carotid bulb. A viral etiology is suggested since it frequently follows

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influenza. Treatment is discussed. The clinical findings of forty cases of carotidynia and the successful results to the treatment in thirty is reviewed.

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