

Atypical Facial Pain

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Introduction

A perplexed group of patients do exist in which no clear organic or psychiatric cause for the complaint of facial pain can be ascertained. They describe their symptoms in unusual ways: like the character of pain being boring, bursting, twisting or drawing. Occasionally there may be an element of ache or sharply painful element superimposed in such a case; but this is periodic in nature. Such patients usually relate their symptoms to deep structures and less frequently to cutaneous. The other important factor is that their complaints are beyond the somato-sensory borders or autonomic neural pathways. The factors which provoke or aggravate the pain are seldom known. The patients are usually women of neurotic behaviour.

Classification of facial pain (based on differential diagnosis):

1. Neuralgia:

Primary trigeminal neuralgia.

Secondary trigeminal neuralgia.

Atypical facial pain.

Other neuralgias: - Glosso-pharyngeal.
 - Post-herpetic.
 - Auriculo-temporal.

2. Vascular disorders:

i. Migraine.

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- ii. Temporal arteritis.
 - iii. Pain referred from heart disease.

3. Skeletal disorders:

- i. Masticatory muscle disorder.
- ii. Temporomandibular joint disorder.

4. Oro-facial disorders:

- i. Tongue disorder.
- ii. Buccal mucosal disorder.
- iii. Disorder of salivary glands.

5. Dental disorders:

- i. Diseases of teeth.
- ii. Periodontal disease.
- iii. Occlusal disharmonies.

6. Psychogenic causes.

7. Miscellaneous:

- i. Para-nasal sinus disorder.
- ii. Eye disorder.
- iii. Ear disorder.
- iv. Cervical spine disorder.
- v. Brain tumours.

Anatomy and Physiology:

A: Anatomy: 1. The pain sensitive intra-cranial structures in supratentorial compartment are supplied by the branches of trigeminal nerve. These include basal dura of anterior and middle fossa, arteries of circle of Willis and proximal portions of major arteries, the meningeal arteries, the superior surface of tentorium and walls of major dural sinuses. The dural structures

are supplied by branches of ophthalmic division of trigeminal.

2. The infra-tentorial dura on the base of skull, proximal major arteries and veins of posterior fossa are innervated by the ninth and tenth cranial and upper cervical C2 C3 nerves:

3. All extra-cranial structures of the head, that cause facial pain, are supplied by the trigeminal nerve and its branches. These include extra-cranial arteries, pericranium, periosteum, para-nasal sinuses, teeth, periodontal structures and orbital contents. Pharynx, tonsils, tonsillar fossa and eustachian tubes are supplied by glosso-pharyngeal nerve and vagus nerve. The tympanic membrane and external auditory canal are supplied by facial nerve. General somatic afferent of 7th, 9th and 10th cranial nerves enter the descending trigeminal tract and synapse in rostral spinal trigeminal nucleus. General visceral afferent portions of 7th, 9th and 10th nerves descend in tractus solitarius and synapse in nucleus solitarius. Hence all the information for face and head is processed centrally in trigeminal system.

B: Physiology:

Information concerning pain referred from these structures come from three main sources:

- i. Patients with well localised pathological process.
- ii. Stimulation of various structures in awake patients during surgery.
- iii. Patients who have undergone section of various cranial nerves for relief of intractable pain.

Such studies have shown that pain from pathological entities in supra-tentorial region is referred primarily to orbital, retro- orbital or frontal region, ipsilateral to the lesion. Pathology in the posterior fossa causes referred pain to occipital or sub- occipital area.

Etiology of Atypical Facial Pain

The pain is usually bilateral and wide spread in nature, but basically arising from the face. There is no apparent cause for the pain and pain seldom follows a course of nerve described in the anatomical consideration. Most authorities agree that the nature of the pain is psychological.

Certain cases were linked to tooth extraction and due to cavities left in bones, after teeth were pulled out. The curettage of these cavities resulted in near remission of the pain.

One important fact, which should be kept in mind, is that the neurological symptoms under the age of 40 years may be the first warning of the onset of Multiple sclerosis.

Management

A careful history and examination is necessary to exclude the known causes of facial pains listed above.

The care of the patient with atypical neuralgia is very difficult and seldom rewarding. The relief is transient, whatever methods of treatment are devised.

These patients appear chronically ill, emaciated and are depressed. They drift from one physician to another in despair.

An attempt should be made for their mood stabilisation and elevation of depression. Psychiatric support with a realistic discussion of their difficulties and analysis of psychological factors contributing to their suffering may be sufficient to satisfy the patients. Long term psychiatric care may be more useful.

Standard operative measures like retrogasserian rhizotomy, alcohol injections or nerve avulsion are to be avoided. Only in very unusual circumstances operative intervention has led to relief but temporarily. Some patients after operation complain that their pain has increased.

Summary

The emphasis is on the fact that before labelling a patient typical or atypical neuralgic, a careful history, examination, investigations and even a psychiatric consultation is advocated, because cases are on record that the intracranial aneurysms and brain tumours presenting with facial pain have been treated long enough for the later to result in death of the patient and these aneurysms or tumours were the etiological agents underlying the facial pain.

References

1. Foster, J.B. Facial pain, *Brit. Med. J.* 4: 667-9, (1969).
2. Lascelles, R.G. Atypical facial pain and depression. *Brit. J. Psychiatry.* 112: 651-9, (1966).
3. Mc Nanghton, F.L. The innervation of intracranial blood vassels and dural sinuses. *Ass. Res. Nerve. Ment. Dis. Proc.* 18: 178-200, (1968).
4. Miller, H. Pain in the face. *Brit. Med.* V. 2: 577-580, (1968).
5. Pilling, L.F. Psychosomatie aspect of facial pain. Philadelphia: 107, (1968).
6. Rubach, W.C. Atypical facial neuralgia due to pulpitis: *Oral Surgery.* 16: 1039-1041, (1963).
7. White, J.D. and Sweet, W.H. Pain and the Neurosurgeons. Springfield. Charles C. Thamas, (1969).