FACIAL PAIN

By K. HARRISON (Manchester)*

FACIAL pain is a constant and puzzling problem to the rhinologist. The greatest care is required to obtain a detailed story to help in determining its causes.

The characteristics and behaviour of the pain must be known, and also the accompanying symptoms and signs. It should be remembered that the phenomenon of referred pain is very highly developed in the trigeminal nerve. *X*-ray investigation of the sinuses and skull, including a basal view, is important and may sometimes be a very helpful clue in establishing a diagnosis.

The sinuses have such intimate relationship to the face, that all too often a diagnosis of sinusitis is made and many fruitless operations are performed. This is a dangerous concept, for only a very small number of cases of facial pain are actually due to inflammation of the sinuses.

There are many pains outside the routine of our own field and enough must be learnt about them in order to recognize them. Clinically the facial territory is a meeting ground for many specialists. The combined opinion may be very helpful in establishing a diagnosis.

The treatment may not be within the province of the diagnostician and the patient must be referred to the specialist more capable of dealing with it. Sometimes, however, a patient may see many specialists without his pain being either diagnosed or relieved.

A number of cases will be described to illustrate these points. They show the wide clinical field and the problems of diagnosis and treatment that arise in patients complaining of facial pain.

Leontiasis Ossea

A male patient, aged 48, complained of pain in the left upper jaw radiating towards the temple. A left upper molar tooth had been extracted without relief.

From childhood there had been a swelling on the right side of the nose and face. On examination there was a marked bony swelling and broadening of both alveolar margins extending onto the hard palate, more so on the right side.

X-rays of the sinuses (Fig. 1) showed marked sclerosis of the bony

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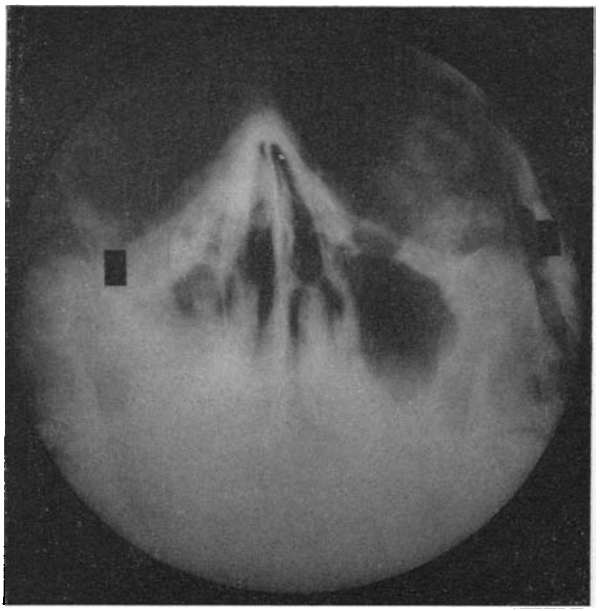


FIG. 1.
Leontiasis Ossea—marked sclerosis of the bony walls of the right maxillary sinus.



FIG. 2.
Leontiasis Ossea—marked porosis of the skull vault, mainly the outer table, and sclerosis of the base. Irregular areas of apparently unaffected bone.

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walls of the right antrum. The radiograph of the skull raised some doubt at first between the diagnosis of Leontiasis Ossea (Fig. 2) and Paget's Disease (Fig. 3).

Cylindroma of the post-nasal space

A female patient, aged 51, presented with a 2 year history of neuralgic pain in the right side of the face and accompanying right earache and

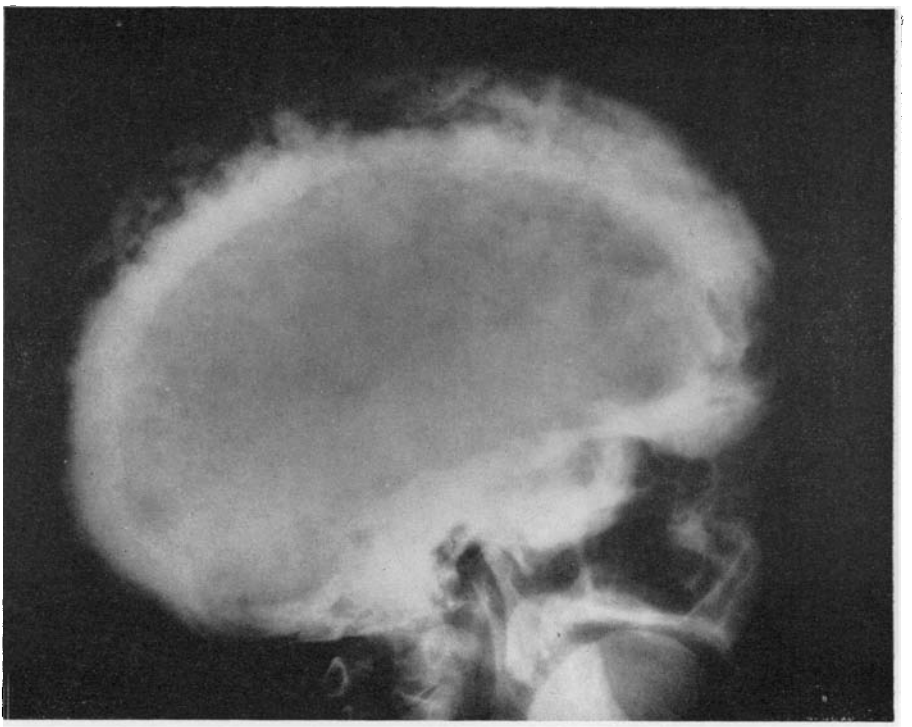


FIG. 3.

Paget's Disease—marked thickening of the bones of the skull vault. Many areas of increased density scattered with porotic bone giving a mottled apparance.

deafness. There was also right nasal obstruction with blood-stained discharge. Clinical examination revealed a tumour on the right side of the vault of the post-nasal space. A basal projection *X*-ray of the skull showed destruction in the region of the right greater wing of the sphenoid (Fig. 4). A biopsy was reported as cylindroma, which is a malignant type of salivary tumour, occurring most commonly in mucous gland sites (Russell, 1955).

The tumour was quite resistant to deep *X*-ray treatment, and this

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has been our usual experience with cylindromas. The neoplasm slowly progressed producing marked morbidity.

Lambert (1954) reviewing a series of 132 post-nasal tumours from the Christie Cancer Hospital, Manchester, noted that about 20 per cent. had neuralgic facial pain as a presenting symptom.

It has been our experience that cylindromas in the post-nasal space have given rise to severe and prolonged morbidity as a result of neuralgic



FIG. 4.

Cylindroma of the post-nasal space—destruction of the floor of the right middle fossa.

head and face pain and this has been even more marked in the slowly growing recurrences (Harrison, 1956). Our neurosurgical colleagues have been able to relieve the pain in some of these patients by a neurectomy of the Vth, IXth and Xth cranial nerves and the upper cervical roots through a posterior cranial fossa approach.

Osteoma of the Left Ethmoid Sinus

A male, aged 30, complained of a few months' history of aching pain in the region of the left orbit with some blurring of vision. His relations had also noticed that the left eye was a little bigger than its fellow.

On clinical examination, there was slight proptosis and the globe was displaced outwards and downwards. *X*-ray of the sinuses showed the presence of a large osteoma in the left ethmoid sinus (Figs. 5 and 6).

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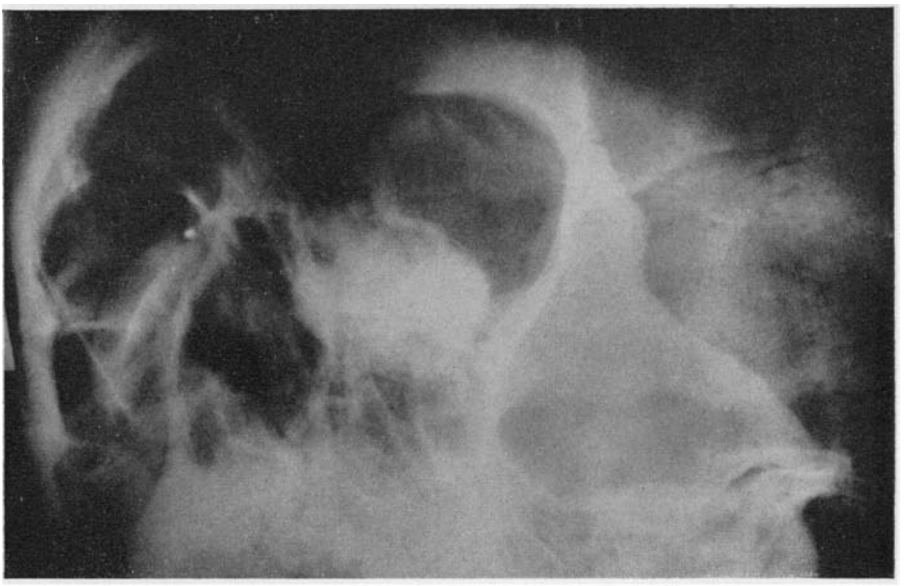


Fig. 5.
Osteoma left ethmoid sinus in oblique view.

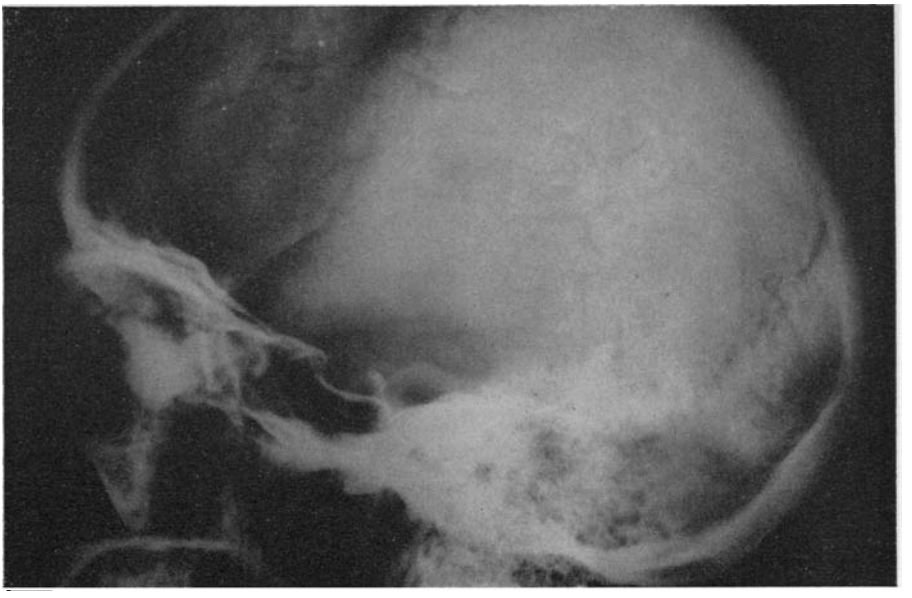


Fig. 6.
Osteoma left ethmoid sinus in lateral view.

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Our neurosurgical colleagues co-operated in this case and the osteoma was excised by a combined intracranial and transorbital approach.

The post-operative progress was uneventful.

Neurofibroma of the Gasserian ganglion

A female, aged 47, complained of long-standing recurrent severe pain in the right cheek and temple. She later developed double vision and right nasal obstruction with epistaxis. There was also right deafness and tinnitus with numbness of the right side of the face.

Clinical examination revealed a complete analgesia of the whole of the right trigeminal area and a right VIth cranial nerve palsy. A basal projection of the skull showed destruction in the floor of the right middle fossa and the apex of the petrous temporal bone (appearances similar to Fig. 4).

There were many features in this case suspicious of a malignant post-nasal neoplasm. The patient was referred by a neurologist who suspected this diagnosis. After full investigation no tumour was evident.

Later, the neurosurgeons explored the middle fossa in order to establish a diagnosis and relieve the pain. A tumour was found in the region of the Gasserian ganglion of the trigeminal nerve which histologically was a neurofibroma.

Aneurysm of the Internal Carotid Artery

A male, aged 54, complained of a 10-day history of severe pain in the right fronto-temporal region. The pain was so severe that he had to retire to bed and vomited several times. The pain remained severe for 2 days and he then developed generalized persistent headaches. Previous medical history showed that a year earlier he had complained of generalized headache with some transient diplopia which he thought was due to a head cold.

He was referred to hospital with a provisional diagnosis of right frontal sinusitis. On clinical examination, he was found to have meningism and he developed diplopia due to a IIIrd nerve palsy. A lumbar puncture revealed uniformly blood-stained fluid. A carotid angiogram showed him to have a trilocular aneurysm at the origin of the right posterior communicating artery (Fig. 7).

Sphenoiditis

A woman, aged 40, complained of intermittent neuralgic pain in the right cheek.

On clinical examination, there was no obvious abnormality. A straight *X*-ray of the sinuses showed an unusual translucency in right ethmoid region. A basal projection was taken and this translucency was thought to

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be a pterygoid extension of the right sphenoid sinus (Fig. 8). An unsuccessful attempt was made during a spasm of pain to displace some lipiodol into the sphenoid sinus. Later, during a quiescent stage, this was repeated successfully (Fig. 9).

The pain was thought to be due to an intermittent obstruction of the sphenoidal ostium. A transorbital exploration of the sphenoidal sinus was performed, the lining mucosa was thickened and polypoidal and was

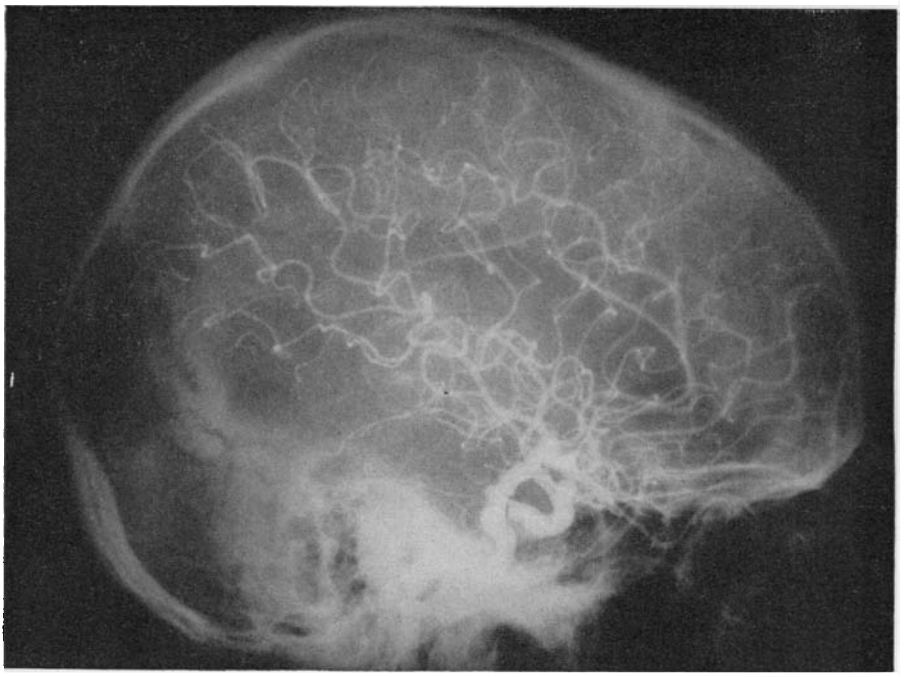


FIG. 7.
Aneurysm of the Internal Carotid artery—trilocular aneurysm at the origin of the right posterior communicating artery.

removed. Following this drainage operation, there was complete relief of pain.

Carcinoma of the Antrum

The next case is one of carcinoma of the left antrum in a female, aged 73. There was a very short 6 weeks' history of intermittent neuralgic pain in the left inner canthus radiating down the lateral border of the nose into the cheek. There was accompanying left epiphora and numbness of the cheek.

Clinical examination showed marked swelling of the left cheek with

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broadening of the infra-orbital margin. There was a slight proptosis with marked chemosis, and some sensory change to pin-prick over the left cheek. *X*-ray of the sinuses showed marked opacity of the left antrum with destruction of its roof and medial wall (Fig. 10).

A carcinoma of the left antrum was suspected and it was explored. A neoplasm had destroyed the anterior wall of the antrum and invaded the soft tissues of the cheek. There was also destruction of the roof and the

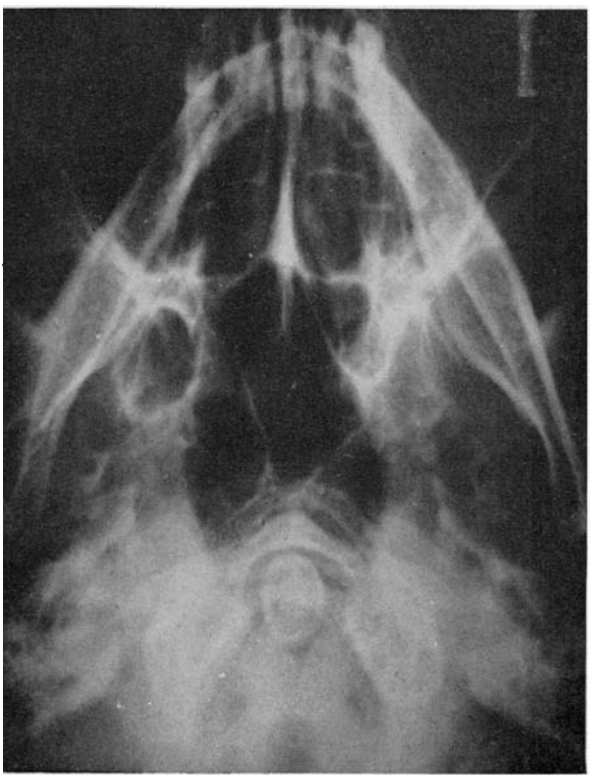


FIG. 8.
Sphenoid sinus—pterygoid extension of the right sphenoid sinus.

naso-antral wall. A biopsy was reported as "poorly differentiated epidermoid carcinoma".

She received megavoltage *X*-ray treatment.

Facial Migrainous Neuralgia

This clinical syndrome is an important one to recognize. Otherwise, many nasal and sinus operations are performed unnecessarily without

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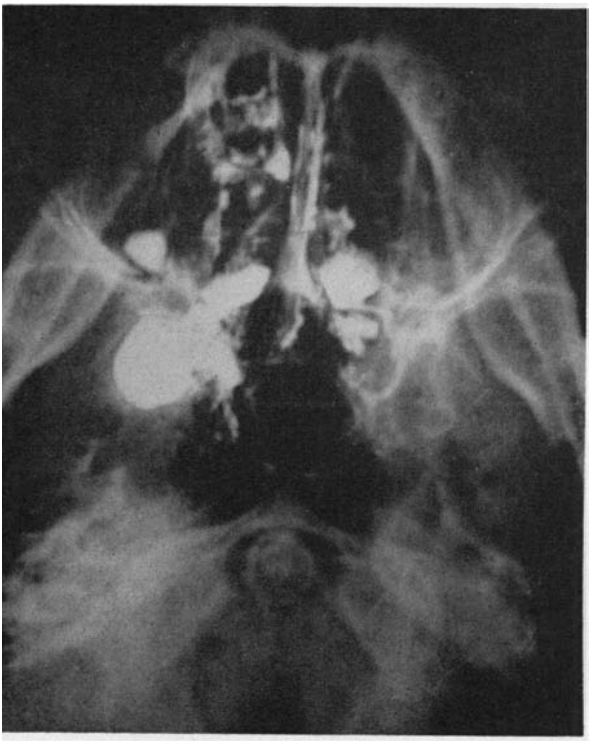


FIG. 9.
Sphenoid sinus—lipiodol displaced into the pterygoid extension.

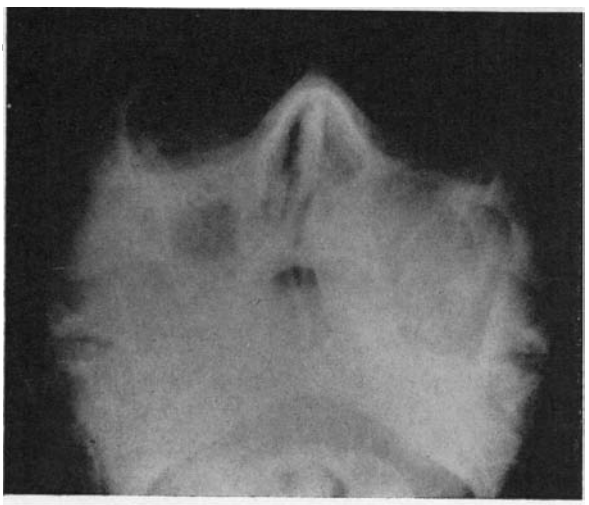


FIG. 10.
Carcinoma left antrum—marked opacity of the antrum with destruction of the walls.

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relief of the agonizing paroxysms of pain. A typical clinical picture will now be described.

A male, aged 36, complained of an 8 year history of paroxysmal attacks of pain in the right cheek, radiating to the peri-orbital and temporal regions, which he described as worse than toothache. Sometimes, there was slight swelling of the cheek. The pain was usually nocturnal and would often waken him at about 2 a.m. There was an accompanying ipsilateral nasal obstruction and watering of the eye. The pain would last anything from 10 minutes to $2\frac{1}{2}$ to 3 hours. The attacks recurred annually between October and March followed by a natural remission.

This syndrome was first described by Harris (1926) as periodic migrainous neuralgia. Since that time, it has been described by other authors under many synonyms. Horton (1941, 1944), in a number of papers, has described a similar pain which he has called "histamine cephalalgia". He did not mention that the paroxysms of pain were self-limiting nor that natural remissions occurred. He claimed relief by using histamine desensitization.

Symonds (1952) stated that attacks could be prevented by daily injections of ergotamine tartrate. In a further paper (1956) he considered that this treatment could be used throughout the self-limiting bouts of pain without any harmful effects of a lasting nature.

Bickerstaff (1959) has reported success with this regime in a series of cases and I, too, have found it very helpful in the relief of the paroxysms of pain of this facial migraine.

Conclusion

The above reports demonstrate some of the varied clinical presentations of facial pain. A searching investigation is usually required. Co-operation with our colleagues in the field can frequently assist in the diagnosis and, what is more important to the patient, its relief. Even so, there are still many cases which remain diagnostic and therapeutic problems.

Acknowledgement

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