Headache and the Otolaryngologist

Thomas Antony, XII/758-A, Panayappally, Cochin - 682 002, Kerala

Headache is the second most common chronic complaint which general practitioners see in their routine work. It may be the same in ENT outpatient as well. The busy ENT surgeon sees little surgical opportunity in a headache case and pushes the patient to a neurologist. The latter has no excitement in what happens outside the cranium and limit their survey to intracranial causes for headache. Various investigations including Xray PNS, CT scan & MRI scan are usually done to serve the purpose of exclusion, with little benefit to the patient. Since the otolaryngologist clears 'most' extracranial causes, the patient may end up with a label of tension/vascular headache. The average doctor is not enchanted by the complaint of headache. Very few medical practitioners take interest in the patient to relieve him of the malady. Headachology is an emerging term as well as the term headachologist [1]

Who manages headache? Usually it is the doctor to whom the patient presents initially, although much depends on the cause of the same in a given patient. If the reason for headache is readily obvious, the patient may be referred to the concerned specialist. There are many specialists who share the territory with Otolaryngologists. Neurologists. Dental Surgeons & Ophthalmologists may not complete the list. Since the sensation of pain is centrally processed, apart from the Neurologist, Psychiatrist has a role. Systemic infections can cause headache, where an Internist alone can help. All see the same anatomy but may not come to the same conclusions. However, the otolaryngologist remains the single medic who is trained to look into the various nooks and niches of head and neck, which gives him an

edge over. To him it is well-nigh easy to rule out ENT causes, and further proceed to look for other reasons for the headache and refer the patient accordingly.

At the turn of the millennium, acquiring a wealth of knowledge and surgical experience in the complex anatomy, ENT surgeon has evolved as the Head and Neck Surgeon. The nasal endoscope, which paved the way to functional endoscopic sinus surgery, has given enlightening information. The otolaryngologist now finds himself in the limelight. It is a historical necessity that he takes a fresh look at what can cause pain in head and neck.

Headache due to infection of the nose and the sinuses is associated with signs that the ENT surgeon knows too well. Septal impaction headache, due to the pressure on the nasal mucosa, between septal spurs or deviations and the lateral wall of the nose, is also familiar to him. So is headache due to mucosal contact in nose. A routine otolaryngological examination may reveal unusual causes of headache as well. When these are excluded, one feels unsure ground. An overview of headache is therefore helpful.

The sad truth is that we donot know *enough* about headache, with the result that nobody can claim to be an expert. It happens to be the most frequent and ill-understood symptom. There are two international journals viz. "*Headache*" and "*Cephalalgia*" dedicated to the subject. Various explanations, theories and classifications have neither been all-inclusive nor conclusive. The terms migraine, vascular headache, tension headache etc have become almost cliché. 'Migraine' occasionally has responded to Functional Endoscopic Sinus Sur-

gery.² Maybe, definitions have to be modified. The “*International Headache Society*” constituted the Headache Classification Committee who has laid down the Classification & Diagnostic Criteria for Headache Disorders, Cranial Neuralgias and Facial Pain.³ Interest in the entity cervicogenic headache, has given rise to “*World Cervicogenic Headache Society*”.⁴

In simple words, headache [or *headache and facial pain*] is pain in the Trigeminal territory with contributions from *glossopharyngeal*, *vagus* and the first three cervical nerves. The causes of such pain are extracranial or *intracranial*. The extracranial causes are the stimulation of skin, subcutaneous tissue, muscles, arteries, periosteum of skull, structures of eye, ear and nasal cavity. Intracranial causes are traction and displacement of venous sinuses, large veins or their dural envelopes, or distension, dilatation and traction of arteries. The brain substance is not sensitive to pain. Part of the dura at the base of the brain, is sensitive. Irritation of the 5th, 9th and 10th cranial & and first three cervical nerves too generate pain. The pathophysiologic mechanism varies. A detailed discussion of the same is beyond the scope of this communication.

The patient may present at the time of headache, or with just history. Good history and clinical signs help diagnosis and management. As a rule localised headache is of greater significance than diffuse headache. The patient may not tell about the duration, character, intensity, relieving and aggravating factors or associated symptoms, unless specifically asked for. The clock-work pattern of sinus pain, episodic nature of migraine, constant or evening worsening of tension headache, the projectile vomiting of ICSOL and bizarre nature of psychogenic headache are all clues to watch for. In refractive errors the headache follows office work, studies or movies.

Is it the first ever or recurring ? Either way, symptoms & signs of intracranial and extracranial disease have to be searched for.

One has to be vigilant about the first ever headache. A *subarachnoid haemorrhage* has to be ruled out. Classically, such headache tends to be explosive and intense & spreads to the back of the neck. There will be photophobia, projectile vomiting and neck rigidity. A leak may not show up in CT scan until 6 hours have passed. A *space occupying lesion* can give localised headache in the early stage and later, signs of intracranial tension. The headache associated with an expanding intracranial lesion is usually relatively mild; the associated symptomatology is often more prominent than the headache. Occipital headache on waking suggests ICSOL. The headache due to *intraventricular* and *posterior fossa tumors* maybe accentuated by changes in head position, coughing, and Valsalva maneuver. Headache with alteration in the level of consciousness definitely demands neurological evaluation. A *subdural haematoma* may show up only 3 mths after a blow; the incident long forgotten. If there is no clue in symptoms and signs, CT scan can come to the rescue. *Meningitis*, *epidural haematoma*, *glaucoma* and *sinusitis* also have to be excluded in a first time headache.

Lesions of the *cervical spine and its ligaments* can give occipital, sometimes frontotemporal headache; examination of the neck is therefore necessary. *Myofascial* pain of head and neck will show local tenderness. A chronic bifrontal, bitemporal or occipital headache, always or towards evening, is more often *muscle contraction headache*; sustained contraction of neck and eye muscles occur in *faulty posture*. Tension headaches are described as pressing, squeezing, tight or heavy. The contracted muscles may be tender.

Among neuralgias, *trigeminal neuralgia* is the most common and is evident by the history, and presence of trigger zones. *Dental* infections and impacted tooth can give unilateral headache and referred otalgia. So do temporomandibular joint disorder. *Temporal arteritis* is rare; usually it is an elderly female. The scalp arteries are tender and thrombosed, ESR is high.

Cluster headache also is rare and affects males. It is intense, non-throbbing with unilateral orbital localization frequently occurring 2-3 hours after falling asleep, although it may occur in working hours. It is described as a cluster of attacks lasting a few weeks. Accompaniments are lacrimation, blocked nostrils, rhinorrhoea and sometimes flush and oedema of face. The headache tends to recur after many months or years.

Migraine also is a recurring headache found more in teenagers and young adults. Prodrome and aura can occur in migraine. Vascular headaches are usually throbbing or pounding. The patient is normal between attacks. There may be a strong family history too, Severe *hypertension* is also known to cause headache. *Psychogenic* factors like anxiety and depression can cause poorly localised headaches. Sleep disorders point to such ailment. Finally, headache may be a symptom of even schizophrenia.

It has been said that except for auscultation of a bruit and palpation of thickened arteries, examination of the head during or between headaches yields little useful information. The Otolaryngologist, as mentioned earlier, is well adapted to examine head and neck. He can draw his own unbiased conclusions. So, after getting the history, the ENT examination should rule out deviated nasal septum and spurs, mucosal contact is the nose, and signs of involvement otherwise, of nose and sinuses. Apart from sinus tenderness, a stoop may worsen the headache or give a weighing down feel on forehead or face, when the sinuses are infected. If

presenting at the time of headache, a Xylocaine test can be done, provided there is no sign of infection. This is done by inserting a cotton wool probe soaked in Xylocaine [2% or 4%], between the lateral wall and the nasal septum where they touch each other, to see if the same aborts headache. [Examination of the neck for limitation of movements, neck rigidity, and myofascial tenderness of temporalis or nuchal muscles, recording of blood pressure, and fundoscopy for papilloedema can also be routinely done.] He can supplement his findings with endoscopic examination of nose and sinuses. Xray PNS and Coronal CT of nose and sinuses give more information when required.

Management depends on the cause of headache; a full discussion is beyond the scope of this article. Suffice to say there are situations when surgical treatment is offered by the otolaryngologist for the relief of headache. Functional Endoscopic Sinus Surgery treat many rhinogenic & sinu-genic headache. A septal Surgery takes care of a septal impaction headache. Sometimes operation on a sinus, or removal of a growth or polyp in the nose is what is required to relieve headache. It may even be an unusual procedure depending on a surprise finding at head & neck examination. A multidisciplinary approach is needed to deal with headache, but the role of the otolaryngologist has so far been underestimated. Evaluation of a headache patient is never complete without an otolaryngological opinion. The article on Facial Pain by Philip H. Golding-Wood is well worth reading over and again.⁵

References:

1. *Communication from North American Cervicogenic Headache society and World Cervicogenic Headache Society.*
2. *Deam M. Clerico, [July 1996]: Pneumatized Superior Turbinate as a cause of Referred Migraine Headache*
Laryngoscope 106:p874-879

3. *Classification and Diagnostic Criteria for Headache Disorders, Cranial Neuralgias, and Facial Pain [1988], First Edition. Headache Classification Committee of the International Headache Society. Cephalalgia, Vol. 8. Supplement 7]*
4. *World Cervicogenic Headache Society c/o Rothbart Pain Management Clinic 16 York Mills Road, Unit 125, Box 129 North York, Ontario, Canada, M2P 2E5 Phone:- [416]512-6407 Fax-[416]512-6375][[Http://www.cervicogenic.com/about.htm](http://www.cervicogenic.com/about.htm)]*
5. *Philip H Golding-wood [1979]. Facial Pain. In John Ballantyne, John Groves, editors. Scott Brown's Diseases of Ear, Nose and Throat, 4th Edn, Vol 3, Butterworths. p385-424.*
6. *Sidney Durman, Stanley H. Ginsburg. [1979]:Headaches and Facial Pain, in. H. Harold Friedman. Editor. Problem-Oriented Medical Diagnosis, 2nd Edn, Little, Brown and Company, Boston, p321-325*