BRITISH JOURNAL OF OPHTHALMOLOGY

Editorials

Trigeminal sensory loss in orbital disease

Rose and Wright have written an interesting paper in this issue that reviews the incidence and cause of trigeminal sensory loss in orbital disease. They have come to a conclusion that this is a relatively infrequent sign and is not commonly associated with malignancy. In addition, they have noted that the affected dermatome is a useful guide to the location of disease but not to the underlying pathology. In response to this interesting study, we reviewed our own database and noted that of patients who suffered pain with orbital disease (124 cases or approximately 12%), 56 had pain associated with neoplasm, 20 of which were benign in character. Nineteen of the benign tumours were neural (optic nerve glioma three, optic nerve meningioma two, sphenoid wing meningioma six, neurofibroma four, schwannoma four) which is not too dissimilar in distribution to the series described by Rose and Wright. In other words, 64% of neoplastic cases associated with pain were malignant and of the remainder, neural or apically located lesions were the major category of tumour encountered.

As a symptom in isolation, this article suggests that trigeminal sensory loss is a democratic sign and does not point to specific pathology as causal. Yet, viewed within the context of the remaining constellation of symptoms and signs seen in each patient, it is of greater importance than might be suggested. In order to derive clinically applicable inferences, these data should be studied in context rather than as a single sign. The appropriate contextual issues to include are: the origin of data in this series; the other signs and symptoms that are characteristic of individual cases; the location of disease; and, finally, the type of lesion. In the clinical situation, this conclusion might be likened to making a diagnosis pathologically or radiologically without all of the clinical information and although it may be correct with regard to the one feature, it is certainly not true for all patients.

In dealing with the origin of data for this series, one cannot help but notice that the findings reflect a specific database since there is not a single case of a nasopharyngeal tumour where pain and paraesthesia are very common signs and symptoms at the time of presentation with orbital findings.[1-3] In fact, in our own series, we found that 74% of nasopharyngeal cancers presented with pain and paraesthesia. In contrast, metastatic tumours had this as a feature in only 25%.[4]

Another area in which context should be analysed carefully is the validity of comparing in clinical situations lesions that are dominated by mass effect versus those that are dominated by inflammation, since in most instances the constellation of features associated with inflammation are distinct and unusual in mass lesions of neoplastic origin. The same argument could be made for comparison of structural versus mass inducing lesions since the structural lesions, particularly those that are post-traumatic, are automatically and very frequently identified by a simple historical and physical context. Therefore, the more clinically relevant way of analysing these data might be to compare malignant (41/63) with benign tumours (22/63) in terms of frequency and importance of this sign. In that context, the presence of this sign certainly is of fairly serious concern particularly in a practice where patients might also include those with lesions arising from the sinuses. It is also of note that several of the benign tumours that are associated with this sign and symptom were of neural origin or were in a location where pressure on the peripheral nerves would be a consideration based on the clinical appearance of the patient as well (that is, close to the superior orbital fissure or orbital apex). These considerations raise the relevance of sensory loss and of pain associated with it.

Another contextual issue that needs to be brought forward in order to give reliable and useful clinical guidance is the location of the disease process. Certainly, a tumour in the superolateral orbit with pain is of concern as would be one that occurs in the medial or inferomedial orbit.[5] Even though the incidence of pain associated with malignancy of the lacrimal gland varies all the way from 9% to 40%, a lesion in this location with pain or paraesthesia should certainly be regarded with more concern than one without this sign or symptom.[4]

I would caution the readership to avoid viewing the conclusion here as an implication that this sign is not as important in a clinical context as indeed it almost certainly is. The presence of this sign and symptom, particularly within the context of lesions that are dominated by mass effect, infiltration, certain locations (posterolateral, medial, and inferomedial), and absence of either history of trauma or inflammatory signs, should make us regard this symptom with great care. Certainly in terms of decision making, the presence of pain and paraesthesia in this context would tend to make us seek an answer to the patient's specific disease process with some degree of more urgent concern.

JACK ROOTMAN

Departments of Ophthalmology,
University of British Columbia and
Vancouver Hospital and Health Sciences Centre,
Canada V5Z 3N9

1 Johnson LN, Krohel GB, Yeon EB, Parnes SM. Sinus tumors invading the orbit. *Ophthalmology* 1984; **91**: 209–17.
2 Spaulding CA, Kranyak MS, Constable WC, Stewart FM. Esthesioneuroblastoma: a comparison of two treatment eras. *Int J Radiation Oncology Biol Phys* 1988; **15**: 581–90.
3 Rakes SM, Yeatts RP, Campbell RJ. Ophthalmic manifestations of esthesioneuroblastoma. *Ophthalmology* 1985; **92**: 1749–53.
4 Rootman J. *Diseases of the orbit. A multidisciplinary approach.* Philadelphia: Lippincott, 1988.
5 Stewart WB, Krohel GB, Wright JE. Lacrimal gland and fossa lesions: an approach to diagnosis and management. *Ophthalmology* 1979; **86**: 886–95.