Fig. 2 : Universal tongue blade

These plates have a small projection at the distal end which fits into the socket at the proximal end of the universal handle and is kept in place by tightening the screw on the handle. The screw is tempered inside the socket to prevent it from getting dislodged and becoming a foreign body (Fig-1&2).

The assembled tongue blade though it offers no technical advantage over the routinely used tongue blades, it makes more economic sense since it has only one universal handle with different tongue plates, thus obviating the requirement of having multiple tongue blades for different age groups.

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UTILITY OF PARANASAL SINUS RADIOGRAPHY

Dear Editor,

Radiographs of paranasal sinuses are frequently taken in patients with obvious nasal pathology to rule out concomitant sinus disease, with equal frequency they are demanded by both general practitioners and otolaryngologists even in patients who do not have apparent nasal pathology like patients with chronic headache, chronic cough, secretory otitis media, chronic pharyngitis, dacryocystitis, nasal turbinate hypertrophy or deviated nasal septum. It is this latter group of patients who are subjected to proof puncture of the antrum if the radiograph is reported positive. A study was thus undertaken to correlate radiographic findings on X-ray PNS with antral washout to see whether paranasal radiography is a useful or an abused unnecessary investigation.

This is a retrospective study of 100 patients in whom there was no infective nasal pathology clinically but whose radiograph showed sinus pathology. The pathology on X-ray PNS was classified as (a) slight haziness of maxillary sinuses, (b) definite haziness of antra (c) opaque maxillary sinus and (d) soft tissue opacity in maxillary sinus. Antral washout was done in almost all the cases and the return was noted. The washouts were as follows (a) clear return denoting no sinus pathology (b) mucoid denoting allergy (c) mucopurulent and (d) purulent in cases with infection. The degree of haziness on sinus radiograph and type of antral washout were compared.

The radiological findings on X-ray PNS were as follows: Slight haziness in 24% cases, definite haziness in 61% cases, opaque antra in 10% of patients and soft tissue opacity in 5% cases (Table-1). One patient had a coincidental finding of osteoma in the (left) frontal sinus. In the slight haziness group although majority of the sinus washouts were clear, 6 patients had a positive antral washout, indicating sinus infection despite radiograph being relatively clear. In this group 18 cases (75%) had clear return on antral washout, 3 cases had mucoid return and another 3 patients had mucopurulent return (Table-2).

TABLE 1
Findings on X-ray PNS

Osteoma	Slight Haziness	Definite Haziness	Opaque	Soft tissue opacity
01	24	61	10	05

TABLE 2

X-ray correlated with proof puncture (P/P)

X-ray / Proof Puncture	Slight Haziness	Definite Haziness	Opaque	Soft tissue
Clear	18	25	02	03
Mucoid	03	12	04	02
Mucopurulent	03	03	01	-
Purulent	-	10	03	-

50 of the 61 cases with definite haziness underwent antral washout. 25 cases (50%) had clear return, 12 cases (24%) had mucoid return, 3 patients (6%) had mucopurulent and 10 cases (20%) had purulent return. Of the 10 cases with opaque maxillary sinus clear return was obtained in only 2 cases (20%) mucoid in 4 patients (40%), mucopurulent in 1 case (10%) and purulent in 3 cases (30%). In patients having soft tissue shadows in the antra suggestive of antral polyp, the return was clear in 3 cases and mucoid in 2 patients.

Paranasal sinus radiography is based on the presence of air in the sinuses. Any change in air content or alteration in translucency caused by any pathology or physiological process, is reflected in the radiograph. Sinus X-rays may appear normal or show evidence of infection in the form of mucosal thickening, fluid levels or total opacity. An opaque sinus may even be due to thickening of the bony walls, small asymmetric antra, or improper centring and rotation of the head leading to difficulty in interpreting radiological appearance.

Many studies have been undertaken to study the utility of sinus radiographs and examine the correlation between radiographic and operative findings. In our series there were 25% false negative cases where X-ray PNS showed only slight haziness of the antrum yet proof puncture was positive. Pfeleiderer et al [1] have reported a rate of 9% to 35% while others have reported results varying from 16% [2] to 60% [3] in this group. Pfeleiderer et al have also reported a very high incidence of false positive results (X-ray showing haziness operative findings clear) - 47% for opaque sinuses and 88% for hazy sinuses. In our study false positive results varied depending on the radiological appearance of the sinuses, it was 75% in cases with slight haziness of sinuses, 50% in hazy sinuses and only 20% in opaque sinuses.

Many reasons have been reported for false positive results. Besides thick walled sinuses, the shadow of the lips [4] narrow

zygomatic recess [5] and superimposed bony shadows may give impression of hazy antra. Oedema of the antral mucosa without infection maybe associated with nasal pathology since nasal and sinus linings are continuous. Profuse watery rhinorrhoea may also be associated with fluid levels in the sinuses. Radiographs of the PNS have a definite value in identifying maxillary sinus pathology even in cases where there is no gross pathology in the nose. Besides sinus haziness one can detect other pathologies like osteomas of the sinuses, erosion of the skull base or sinus walls by tumours. It is important to stress that all patients with nasal symptoms particularly of long duration should undergo sinus X-ray. Radiograph of the PNS is thus an important and useful modality of investigation.

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