OTITIS EXTERNA AND MALPOSED THIRD MOLARS

By B. DUNN (London)*

THE ætiology of otitis externa is almost as vast as the number of cases seen in any E.N.T. department. Impacted wisdom teeth are said to be responsible for some cases, but careful scrutiny of the literature has failed to find any papers on the subject. Scott Stevenson (1954) said, ". . . the association of an impacted or badly erupted wisdom tooth with otitis externa is too common not to have some ætiological significance . . ." This ætiological cause has an attractive basis because the most important complications of impacted mandibular third molars are distal caries and periodontoclasia of the second molars (Millar, 1957) and with the development of inflammation "neuralgic" pain occurs. Due to anastomosis between the second and third branches of the Vth nerve with the tympanic plexus otalgia may occur (Stones, 1951). It is easy to imagine patients with referred pain scratching the skin of the external canal producing otitis externa, or alternatively the externa is produced by a simple neurological reflex arc.

Material and Methods

It was originally decided to initiate a series in which two groups, one with and one without otitis externa, were compared statistically for the incidence of malposed third molars. This unfortunately has not been possible, because as Winter (1926) has pointed out, although impaction occurs more in third molars than any other tooth, there are eight types or degrees of malposition. Thus, although radiological evidence may suggest some degree of impaction, dental opinion may disagree and decline to remove the suspect tooth, especially in the absence of "dental" symptoms.

An alternative was to find the incidence of impacted third molars in the general population and compare that with the incidence found in otitis externa. In a large series of routine full-mouth radiographs Dachi and Howell (1961) found 17·5 per cent. mandibular third molars were impacted. Professor Prophet and Dr. Cohen (1961) have suggested that in the age group 18 to 28 some 25 per cent. might have impacted wisdoms. Blum (1923) in a series of 457 malposed teeth found that 64 per cent. were malposed third molars. Another estimate was made by taking 100 random

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cases over 21 from the Casualty Department of University College Hospital, who had skull *X*-rays for other than dental causes. In cases of doubt these were presumed to be impacted, and this total was 16.

The cases of externa in this series were all seen at this hospital, and most of them had received some treatment from their general practitioners. They were random in selection, as I was permitted to see all cases sent to the hospital. The methods of treatment were those generally employed in this country (Lindahl, 1960, and Stewart, 1961). The cases eliminated were those under 17, and those with known or suspected ætiological causes of otitis externa, such as middle-ear disease, upper respiratory tract infections, dental caries, seborrhœic dermatitis and porphyrinuria. Cases in whom impaction could not be excluded on clinical grounds, or by reference to their dentists, were sent for radiological examination. Those cases in which impaction was reported were referred to the National Dental Hospital (N.D.H.).

Results

No. of Cases	100
No. of Cases with bilateral otitis externa	69
No. of Cases with right otitis externa	16
No. of Cases with left otitis externa	15
No. of Cases with malposed molars in otitis externa cases	6
No. of Cases with malposed molars in casualty series	16

CASES

(A) Bilateral otitis externa intermittently for 1 year. *X*-ray revealed both upper and lower third molars to be impacted. Referred to N.D.H. where wisdoms were considered not to be giving any symptoms. Following intensive treatment, patient has had no trouble for a month.

(B) Right otitis externa for some months. *X*-ray revealed impacted lower right third molar. Referred to N.D.H. who did not consider wisdom was impacted. Following treatment there has been no recurrence for 9 months.

(C) Right otitis externa followed by left. *X*-ray revealed impacted upper and lower third molars. Refused to go to N.D.H. and has since had no trouble for 6 months.

(D) Right otitis externa for some months. *X*-ray revealed both lower molars to be impacted. Referred to N.D.H. who extracted them. This was shortly followed by left otitis externa(!). However, for the past 6 months there has been no trouble, and the pain from the right ear has not recurred.

(E and F) Both had unilateral otitis externa with impacted lower wisdoms. Referred to N.D.H. who after further *X*-ray considered the teeth were not impacted. Following treatment both cases resolved, and have had no further treatment.

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Comments

Since statistical analysis was impossible these results can only be evaluated on their merits. Even allowing for the bias in the incidence of impaction in the casualty series, it would appear that there is no ætiological significance between malposed teeth and otitis externa. This is reinforced by the fact that dental opinion was that not all of the six cases were actually impacted. Case D is of especial interest in that following extraction of the impacted lower wisdoms there was a severe episode in the previously unaffected ear, but the patient never again suffered from the pain previously experienced in the affected ear.

It may be that in the past there has been some confusion between the discomfort and irritation of otitis externa and the actual throbbing "neuralgic" pain of an impacted wisdom tooth.

As a result of the experience with these cases, the author is struck forcibly by the presence of some degree of psychosomatic illness in almost all of the cases. This is not a new finding, Whitlock (1960) makes the interesting observation that he is fairly convinced that any emotionally precipitated dermatitis is pruritic. It would be of considerable interest to have had a psychiatric opinion as well as the dental one in the present series.

Summary

In a controlled series of cases no relationship could be found between otitis externa and malposed third molars. It is thought that in the past there has been confusion between the symptoms experienced in the two conditions.

The high incidence of psychosomatic illness amongst these cases was an interesting finding.

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