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SCIENTIFIC SECTION

Commentaries on scientific papers published in this edition

Severe retrognathia as a risk factor for recent onset painful TMJ disorders among adult females

J. R. Miller, L. Mancl and C. Critchlow

This paper is a case-control study that reports a strong association between severe retrognathia and recent onset of TMJ pain.

The study included 29 adult females with recent onset of TMJ pain and 104 controls. The registration of Temporomandibular disorders (TMD) symptoms were made by a questionnaire. The cases had an onset of pain from the TMJs during the last 3 years, while the controls reported no symptoms from TMJs.

To record mandibular sagittal position, a standardized profile photograph of each participant's face was taken and evaluated. By using this method, although it is probably less reliable than radiographs, it was possible to collect data from both the cases and the controls.

The authors found that severe retrognathia was strongly associated with recent onset of pain from the TMJs, but only a small proportion of these symptoms were attributable to severe retrognathia among the total population of adult females. However, a large proportion of TMJ symptoms were potentially attributable to severe retrognathia among adult females with severe retrognathia. Potential confounders were evaluated by using a logistic regression analysis that was conditional on age, race and education level, which were suspected to be related to both the exposure and disease.

The discussion around aetiological factors for the development of TMD has been a hot topic during the last few decades without giving any simple or clear answers. The present paper is well conceived and designed, and addresses the discussion around aetiological factors of TMD in a challenging and interesting way.

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An audit of 'early debond' cases in the national outcomes audit of patients treated with upper and lower fixed appliances by Consultant Orthodontists in the UK

R. E. McMullan

In 1999, the Consultant Orthodontist Group carried out a survey of completed fixed appliance cases treated by consultant orthodontists. A total of 823 completed fixed appliance cases were returned by a large proportion of the consultant orthodontists in the UK, each orthodontist submitting up to six cases. This research report is a well-presented study of those cases returned in the 1999 audit, but which were reported as having been being discontinued before the planned result was achieved. The study reports the outcome in terms of Peer Assessment Rating (PAR). The cases studied were cases noted as having been discontinued early by the consultant treating the case. Ninety-two (11.2%) of the cases in the COG study were discontinued in this way. Pre- and post-treatment PAR was independently measured, and the results compared with an established standard of PAR reduction established in a previous audit of the whole sample. The results showed that the discontinued cases were less likely to be 'greatly improved', but more likely to be 'improved', with only slightly more likely to be in a 'worse/no different' category. There was a 67% overall reduction in PAR (3% short of the established standards) and a 6.5% reduction in PAR score lower than 30% (3.5% more than established standards). Although it was concluded that discontinuation of orthodontic treatment is associated with a reduced level of treatment outcome, it was clear that discontinued orthodontic cases are associated with a significant improvement for the patient in any event. Interestingly, most cases were discontinued at the request of the patient.

This is a valuable report in an area of interest to many orthodontists and on a subject that is poorly reported in the literature. The authors point out that the results should be accepted cautiously, since the discontinuation

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was a subjective judgement from an uncalibrated group of clinicians and, in addition, the stage of treatment at which the debond occurred was not recorded. Nevertheless, this report should be read by all orthodontic clinicians, many of who will have pondered deeply about the effects of removing fixed appliances earlier than originally intended.

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Practical aspects of undertaking research in the primary care setting

L. P. Y. Hichens, J. R. Sandy, H. N. Rowland, A. G. McNair, S. Clark, D. Hills, P. Huntley, S. Ransome, M. Forty, J. Peak and A. C. Williams

This is an interesting paper that describes the practical aspects of conducting research in a primary care setting. It is also important that the investigators have approached this from the viewpoint of both the practitioner and the research team.

Over the past few years, most contemporary orthodontists have accepted that evidence-based care is not derived from case reports and poorly controlled retrospective studies, but needs information obtained from randomized controlled trials. Nevertheless, most of these RCTs have been carried out in secondary care settings, which may not be relevant to the primary sector, which delivers most orthodontic care.

The authors of this paper outline their experience of carrying out two projects. One of these was a randomized trial of two types of retainer and the other was a qualitative investigation with the aim of obtaining information on the delivery of treatment.

This paper provides useful information on the advantages of this approach to the practice and research team. It addresses issues regarding recruitment, managing the research and dissemination of results. My only frustration was that more information on the two studies that were carried out was not included in this paper.

Nevertheless, this is an important addition to the literature because it may encourage more specialist practitioners to become involved in research that is carried out in the primary care setting.

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