assessment of dental anxiety in the IOSN. We value the attention to the often neglected subject area of psychometrics in clinical assessment and decision making. It is hoped that this note will have made a useful addition to the continuing development of the IOSN.

R. Freeman, G. Humphris, by email

1. Shokouhi B, Kerr B. A review of the indicator of sedation need (IOSN): what is it and how can it be improved? *Br Dent J* 2018; **224:** 183–186.
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3. Humphris G, Crawford J, Hill K, Gilbert A, Freeman R. UK population norms for the modified dental anxiety scale with percentile calculator: adult health survey 2009 results. *BMC Oral Health* 2013; **13:** 29.

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Oral medicine

Chronic hyperplastic candidosis

Sir, in their review of the diagnosis and management of oral candidosis,[1] Lewis and Williams raise the issue as to whether anti-fungal therapy prior to biopsy for suspected chronic hyperplastic candidosis (CHC) will enable the histopathologist to state whether any epithelial atypia which is identified microscopically is genuine dysplasia or merely a reactive change to the infection.

Unfortunately, pre-biopsy antifungals might complicate rather than simplify matters, since the histological changes in the oral mucosa caused by candidal infection may persist even after antifungal medication but without any demonstrable fungal hyphae, even with special stains. The problem in this situation is that the microscopic features of candidal infection are not specific and might prompt the pathologist to consider other diagnostic possibilities such as non-specific chronic hyperkeratosis and inflammation, migratory stomatitis/glossitis (ie geographic tongue) or rare entities such as irritant contact stomatitis, plasma cell stomatitis, Reiter's syndrome and psoriasis, a potentially misleading differential diagnosis that could confuse subsequent clinical management.

On the other hand there are occasions when, as the reporting oral pathologist, I add 're-biopsy after antifungal therapy might be helpful' at the end of the histopathology report if, in the presence of histologically-proven candidal infection, I have been unable to decide whether there is genuine epithelial dysplasia or not. Some cases of CHC resolve after anti-fungal medication and thus re-biopsy is not justifiable on clinical (or ethical) grounds. It is assumed that in such cases the epithelial atypia was indeed reactive, but the possibility also exists that anti-fungal therapy cures genuine dysplasia in some patients with CHC.

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1. Lewis M A O, Williams D W. Diagnosis and management of oral candidosis. *Br Dent J* 2017; **223:** 675–681.

The authors M. A. O. Lewis and D. W. Williams respond: We thank Dr Barrett for his comments regarding the use of pre-biopsy antifungal therapy in relation to chronic hyperplastic candidosis (CHC) and his interest in our recent paper on the management of oral candidosis.[1] CHC has a characteristic clinical presentation consisting of bilateral white patches in the commissure regions of the mouth in a patient who invariably has a smoking habit. In the majority of suspected cases, a dramatic clinical improvement occurs following the provision of fluconazole 50 mg daily for seven days, to the extent that a diagnostic biopsy is subsequently not required. The significant impact of fluconazole, both clinically and histopathologically, has previously been reported.[2] However, it is essential that the patient stops smoking, otherwise recurrence is likely.

The response to pre-biopsy antifungal therapy in this situation also removes the need for a post-antifungal therapy re-biopsy of CHC in case where there has been obvious clinical improvement. We present here two illustrations (Figs 1 and 2) of a recent patient of ours, which demonstrate the significant improvement from what clinically appeared to be a highly suspicious mucosal abnormality at initial presentation, to a far less worrying mucosal changes following fluconazole therapy. In addition, the use of pre-biopsy antifungal therapy in this patient made selection of biopsy site and the biopsy procedure itself far more straightforward. As is often the case with diagnosis of mucosal disease, a decision has to be made on an interpretation of the information available, specifically a combination of the clinical signs and symptoms supported where necessary by the findings reported by an oral pathologist. The clinical features can differ widely between patients but ultimately the clinician has the responsibility to decide on the management of an individual case and the requirement of a biopsy.

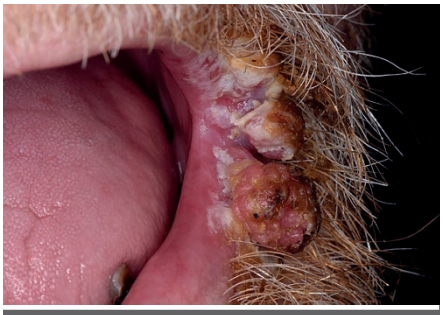

Fig. 1 Crusting at the left angle of the mouth at initial presentation

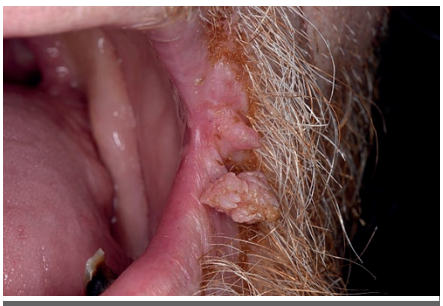

Fig. 2 Appearance following systemic antifungal therapy

In our practice, the use of pre-biopsy antifungal does have a role in investigation of the majority of patients presenting with suspected CHC. Biopsy is certainly indicated whenever there is doubt concerning the clinical diagnosis and likewise re-biopsy of a mucosa abnormality is necessary when the histopathological findings, in particular the presence of epithelial dysplasia, do not reflect the signs seen clinically. We suspect that the true relationship between the presence of candida in the tissues and dysplasia will remain unresolved.

1. Lewis M A O, Williams D W. Diagnosis and management of oral candidosis. *Br Dent J* 2017; **223:** 675–681.
2. Lamey P-J, Lewis M A O, McDonald D G. Treatment of candidal leukoplakia with fluconazole. *Br Dent J* 1989; **166:** 296–298.

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It's occlusion, stupid

Sir, after almost 40 years I continue to be confounded by my profession's inability to reconcile the connection between occlusal disease (OD)/temporomandibular disorder (TMD) and occlusion. Having had to actually *treat* patients with TMD symptoms and/or failing dentitions, in my experience I can unequivocally say that the occlusion is the primary aetiologic factor in the vast majority of cases.

So why such a discrepancy between what some of us do every day, and what 'the literature' says? I believe part of the problem is understanding the aetiology. OD/