The ‘Challacombe’ Scale

A S Pharma discusses the severity and diagnosis of dry mouth

Treatment outcomes are increasingly recognised throughout UK health care as more important than other considerations such as meeting targets, inputs of treated oral and general care. In this context the primary post-diagnosis requisite in all disease management/treatment must be an accurate assessment of the initial severity of the condition. The challenge then is to create a gauge or ‘yardstick’, against which to measure the treatment’s success. In mucosal disorders involving either hypo-salivation or dehydration it is also necessary to distinguish between pathological and physiological causes, which have been one focus of the work at the Guy’s Hospital Dry Mouth Clinic. (Guy’s & St. Thomas’ NHS Foundation Trust).

Evidence suggests that perhaps 20 per cent of the population suffers from a dry mouth, and numbers are growing as more and more medications prescribed which has the side effect of reducing salivation. There are more than 1,000 drugs in the BNF (British National Formulary), including those for treating high blood pressure, diuretics, anti-depressants, histamines and many others, which impact gland seclusions or affect glandular nerve impulses and lead to a 25 per cent reduction in the flow of salvia. When more than one drug is prescribed, the problem can be exacerbated by up to 75 per cent, and prescribing clinicians are not always fully aware of the combined effect on oral lubrication.

Patients referred to the Guy’s Hospital Dry Mouth Clinic may undergo tests for Sjogren’s syndrome, the most common autoimmune condition after rheumatoid arthritis, but which is often unrecognised. In Sjogren’s syndrome, white blood cells attack the tear and saliva glands, causing dryness, red and sore eyes. Women, who are most commonly affected, may also suffer vaginal dryness. The Guy’s Hospital Dry Mouth Clinic team is participating in a major, multi-national study of Sjogren’s syndrome to widen understanding of the condition.

Having confirmed xerostomia, the clinicians then determine the severity of the condition and whether treatment is required. Applying the Challacombe Scale measures the acuteness of the condition relative to the saliva flow and mucin density. The Scale has been proven over two years of clinical application and provides a common reference point for use between clinicians, as well as indicating treatment options. While a high score is a clear indication that treatment is needed, the more radical option with a low score is not to intervene, which can be a demanding decision and often requires specialist knowledge.

An additional benefit of the Challacombe Scale is that the patient’s progress can be monitored over time, measuring the efficacy of treatment or indeed introducing treatment in the event of deterioration.

Widespread lack of awareness amongst both clinicians and the general public has led to a frequent failure to diagnose and treat dry mouth, especially in the elderly demographic. The misconception persists that age is a major contributory factor, the system of remuneration has discouraged a comprehensive oral examination. Patients are themselves more likely to consult their GP for non tooth related symptoms at reduced cost. Nevertheless, the dentist is usually better qualified to give a diagnosis, although the involvement of the patient’s medical history needs to be stressed when prescription drugs are involved, to allow an understanding of the difference between ‘wetness’ and ‘lubrication’. This difference can be crucial when deciding whether to offer a saliva substitute.

The Challacombe Scale is not intended as a research tool but as a practical, empirical measure for dental professionals to assess the severity of dry mouth syndrome and to help them determine when treatment is required. The composition of saliva includes protein, and lubrication is also necessary throughout the length of the oesophagus to facilitate swallowing, and so wetting alone is not a solution in severe cases.

Research undertaken by the Guy’s Hospital Dry Mouth Clinic has confirmed that a 50 micron layer of mucin is necessary to maintain a smoothly functioning, healthy oral cavity. By introducing a reliable, proven system of reference to this important but currently under-recognised area of oral health the Challacombe Scale offers practitioners an opportunity to discuss the problems of a dry mouth with patients who may have become resigned to the discomfort as a consequence of their medication, or in the mistaken belief that nothing can be done as they are simply getting older.

A.S. Pharma is proud to be associated with this important work and Professor Challacombe’s pioneering scale.

For further information, please contact A S Pharma on telephone 08700 664 117 or email: info@aspharma.co.uk

About the author

Professor Stephen Challacombe of King’s College, London and Guy’s Hospital Dry Mouth Clinic, has developed and refined the Challacombe Scale as a universally available method for assessing the diagnosis, measurement and treatment of symptoms of oral dryness as it is more commonly called.

It is the result of ten years’ work headed by Professor Challacombe who has published over 80 peer reviewed papers on mucosal immunity, immunological, histological and microbiological aspects of oral dryness and is recognised as one of the leading experts in this specialist field.