

Geographical Tongue: Cleared with Antimicrobial Mouth Wash - A Case Report

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Abstract: This report relates how an antimicrobial mouth wash which cleared the Geographical Tongue (GT), a condition with uncertain etiology and no specific treatment.

CASE REPORT

The patient aged 79 yrs, was not diabetic, not on steroids, receiving lowest doses of antihypertensive drugs (beta blocker and Ca⁺⁺ channel blocker) 1988 to 1996 and later changed to ACE inhibitor enalapril. In 2004 it was changed to ramipril, which produced severe loss of taste and glossitis as small ulcers. Injections of folic acid, Vit B12 and nicotinamide for 5 weeks did not help. In January 2005 ACE inhibitor was replaced with ARB losartan. The lesions in the anterior portion of tongue were suggestive of GT. A patch of loss of epithelium appeared on one side, increased for a time, healed and reappeared in the other half. When losartan was changed to Telmisartan in March 2005, taste improved, but the tongue lesions persisted.

In May 2005, the patient developed a periodontal abscess which was opened and irrigated. This was followed by antimicrobial mouth wash PLAX[®] (triclosan 0.03% w/v, sodium fluoride 0.025% w/v, ethyl alcohol 12.0% v/v) - applied for 30 seconds, spit out and rinsed 20 min later, after each solid meal for 1 week and once daily later. Surprisingly there was simultaneous complete reversal of the GT lesions within 10 days. The tongue lost white coating and the desquamated portion changed in color. With tongue normal for 3 months, the daily mouth wash with PLAX[®] was changed to twice a week. In April 2006 (11 months after first episode) two red areas again appeared with raised margins. PLAX[®] mouth wash was repeated vigorously. The tongue coating was reduced. By sixth day the anterior part of tongue was smooth and rest of tongue less coated. By the 10th day tongue regained normal appearance.

DISCUSSION

Benign migratory glossitis, called 'geographic tongue', with undetermined etiology, causes the patient considerable worry. In most cases, patients do not require treatment other than reassurance

because of benign nature of the disorder¹. Total *atrophic tongue* is attributed to nutritional deficiencies, Vit B12, folic acid, or iron and partial atrophic tongue is referred as GT². In the present case Vit A, folic Acid, B12 and nicotinamide given as injections did not ameliorate the condition. Various hypotheses proposed for GT are - an expression of oral psoriasis,³ atopy⁴ and oral candidiasis². It is being treated with various procedures: brushing of tongue, topical or systemic corticoids, immuno suppressants cyclosporine⁵. In the present case GT was cleared after an antimicrobial mouth wash indicating a role for microbes in its etiology. Since taste loss preceded the tongue manifestations, it is possible that microbial invasion caused GT over changes induced by angiotensin converting enzyme (ACE) inhibitors in the tongue. Though the taste sensation was restored after use of ARB, tongue lesions reverted only after using the antimicrobial mouth wash. Further trials would help in confirming this beneficial effect of antimicrobial mouth wash in GT. ACE inhibitors are known to produce cough and loss of taste. The pharyngeal secretions can be a source of infection in susceptible individuals. It is necessary to investigate the role of ACE in controlling taste and maintaining the structural integrity of tongue.

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ETHICAL GUIDELINES FOR BIOMEDICAL RESEARCH

The need for uniform ethical guidelines for research on human subjects is universally recognised. It has acquired a new sense of urgency as the critical issues in the area of biogenetic research involving human subjects have become acute. Apart from the mandatory clinical trials on new drugs, a number of diagnostic procedures, therapeutic interventions and prevention measures including the use of vaccines, are being introduced which involve human subjects. Further the advent of new medical devices and radio-active materials and therapeutic benefits of recombinant DNA products have added a new dimension to the ethical issues that need to be considered before evaluating these for their efficacy, utility and safety.

Any research using the human beings as subjects shall bear in

mind the following principles of : (i) essentiality, (ii) voluntariness, informed consent, (iii) non exploitation, (iv) privacy and confidentiality, (v) precaution and risk minimisation, (vi) professional competence, (vii) accountability & transparency, (viii) maximisation of public interest and distributive justice (ix) institutional arrangements (x) public domain (xi) totality of responsibility and (xii) compliance.

Recent advances in the field of Assisted Reproductive technologies, organ transplantation, Human genome analysis, and gene therapy promise unquestionable benefits to mankind. At the same time, they raise many questions of law and ethics, stimulating public interest and concern.

(Source : ICMR Publication 2000)