CASE REPORT

Geographic tongue and tenofovir

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SUMMARY

A 55-year-old male patient with chronic hepatitis B was started on tenofovir. One month after initiating the new medication, he developed severe symptomatology with odynophagia and a very painful tongue. The physical examination reveals multiple erythematous patches on his tongue and a biopsy was performed. It allowed the diagnosis of benign migratory glossitis or geographic tongue. The patient was kept on tenofovir, but had to start topical corticoid therapy. Geographic tongue is a common condition that may be caused by drug idiosyncrasy, but has never before been associated to tenofovir. It is usually asymptomatic, but sometimes it causes severe symptoms, being an important impairment of quality of life.

BACKGROUND

Geographic tongue, also known as benign migratory glossitis, is a benign inflammatory condition of unknown aetiology characterised by multifocal, irregular, well-defined, ulcer-like erythematous patches with a white rim on the tongue's dorsal surface or lateral borders.¹ These lesions may change in location, pattern and size, hence the name 'migratory'.

Benign migratory glossitis has an estimated prevalence of 2% in the general population² and an increased incidence in patients with psoriasis reaching 9%.³

The diagnosis is usually clinical, but a biopsy may be indicated. The differential diagnoses includes candidiasis, Reiter's syndrome, lichen planus, leukoplakia, systemic lupus erythematosus and herpes simplex virus.¹

It is usually asymptomatic, but seldom can it be a cause of pain or burning sensation, with a significant impact on the quality of life. Treatments with topical anaesthetic agents, antihistamines, corticosteroids and tacrolimus have been tried, but are of unproven benefit.⁴

Although the aetiology is unknown, it is accepted that it may be associated with drug toxicity, but has never, to our knowledge, been specifically associated with tenofovir.

Pictures from the tongue and the biopsy are provided.

CASE PRESENTATION

We present the case of a 55-year-old male patient with a personal history of smoking and cirrhosis owing to chronic hepatitis B that was reactivated during chemotherapy for a non-Hodgkin's lymphoma in 2001. He had been medicated with lamivudine since 2001 and adefovir was added in 2008. In 2011, antiviral therapy was switched to tenofovir.

After 1 month of being started on tenofovir, he started to complain of dry mouth, very painful tongue and severe odynophagia, especially early in the morning. His oral examination revealed a tongue with a multiple well-demarcated erythematous patches, mostly on its right border (figure 1A,B). His skin examination was unremarkable.

INVESTIGATIONS

A biopsy of the tongue was performed (figure 1C,D) and revealed acanthosis and epithelial psoriasiform hyperplasia, with intraepidermic spongiform pustules, parakeratosis foci and microabscesses in the corneal layer. A mild perivascular lymphocytic infiltrate of the superficial corion was seen. Periodic acid Schiff colouration was negative for fungal agents. These features are compatible of geographic tongue and the diagnosis was established.

TREATMENT

Therapy with proton pump inhibitor and topical steroid (β -methasone) was started with moderate efficacy.

OUTCOME AND FOLLOW-UP

The hepatitis B viral load was always kept below the lower level of detection. The alanine transaminase level was normal during this period and tenofovir therapy was kept because the patient was highly motivated and refused to change the antiviral medication.

Figure 1 (A) Well-demarcated erythematous patches with raised white rim on the surface of the tongue. (B) Erythematous patches on the surface of the tongue. (C) Psoriasiform features with epithelial hyperplasia—periodic acid Schiff stain. (D) Intraepidermic spongiform pustules, parakeratosis foci and microabscesses—periodic acid Schiff stain.

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Currently, he still has the erythematous patches on his tongue, but with mild associated discomfort.

DISCUSSION

The absence of a previous exacerbation and the chronological sequence regarding the introduction of tenofovir therapy and the beginning of the symptoms may suggest a possible causal implication, which has never been described before.

Learning points

- ▶ Tenofovir may be associated with geographic tongue.
- ▶ Geographic tongue can be very painful interfering strongly with quality of life.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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