



A painful gum

Case study

This middle aged Malaysian man presented complaining of painful gums for a few months. He is known to have had epilepsy since childhood.



Question 1

What is the abnormality shown in this photograph?

Question 2

What is the most likely cause of this abnormality?

Question 3

What are the pathological mechanisms leading to this abnormality?

Question 4

What are the other possible causes of this abnormality?

Question 5

What is the management?

Answer 1

The oral cavity of this man shows gum hyperplasia.

Answer 2

He has epilepsy, therefore the most likely cause is antiepileptic drug induced gum hyperplasia. Phenytoin is a commonly used antiepileptic drug. Gum hyperplasia is a well known side effect, occurring in up to 65% of epileptics taking phenytoin, especially those taking high doses for prolonged periods.¹

Answer 3

Gum hypertrophy is due to expanded or fibrotic connective tissues with varying degrees of inflammation. The histology features of gum hyperplasia include hyperplasia in junctional epithelium and hypertrophy in keratinised epithelium with excessive connective tissue accumulation.¹ Recent studies also demonstrated elevated levels of cytokines and growth factors in drug induced gum hyperplasia such as interleukin-6 (IL-6), IL-1 β , platelet derived growth factor-B (PDGF-B), fibroblast growth factor-2 (FGF-2), transforming growth factor- β (TGF- β), and connective tissue growth factor (CTGF).² This finding suggests the role of abnormal balance of cytokines in gingival tissues in the pathogenesis of drug induced gum hyperplasia.²

Answer 4

Other possible causes of gum hyperplasia are: poor oral hygiene, recurrent gingivitis and acute myeloid leukaemia and drug induced such as nifedipine and cyclosporin.

Answer 5

Management includes reduction or discontinuation of the drugs and referral to a dentist for evaluation. In severe cases, gingival surgery may be indicated.³ Folate mouthwash has been shown to promote gingival health by reducing inflammation, but systemic oral folate supplements has not been proven effective in gum hyperplasia.⁴

Conflict of interest: none declared.

References

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