

enlargement recurring despite periodontal treatment.

Several alternatives to phenytoin are available, but they may not be as well tolerated or they may not control seizures as well. Some patients can switch to a lower dose of phenytoin combined with another anticonvulsant.

If a patient develops gingival enlargement as a result of taking a particular calcium antagonist, they will usually also develop it in response to other calcium antagonists. Alternative classes of antihypertensive medication may be suitable for patients who are being treated for hypertension.

The dose of cyclosporin may be reduced in the course of medical treatment, and can also be reduced in some cases where patients are on a maintenance dose, with no adverse effects. Once the gingival enlargement is drawn to the treating physician's attention, it may be possible to maintain a patient on a lower dose.

Changing from cyclosporin to tacrolimus can be considered if significant gingival enlargement recurs after excision. Tacrolimus has a different toxicity profile and is not associated with gingival enlargement. It has the same interactions with diltiazem, which could still be used, producing a residual but diminished gingival enlargement.

Conclusion

Gingival enlargement is an under-recognised adverse effect of cyclosporin, phenytoin, and the calcium channel antagonists. Medical practitioners and pharmacists are ideally placed to advise patients of the possibility of this effect and emphasise the importance of maintaining good oral hygiene as a preventive measure. Doctors can identify the problem by looking in the patient's mouth and can then refer the patient for dental management if necessary.

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FURTHER READING

- Hallmon WW, Rossmann JA. The role of drugs in the pathogenesis of gingival overgrowth. A collective review of current concepts. *Periodontol* 2000 1999;21:176-96.
- Seymour RA, Heasman PA. Drugs and the periodontium. *J Clin Periodontol* 1988;15:1-16.

Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 23)

5. Among the calcium channel antagonists, gingival enlargement is most frequently associated with dihydropyridines.
6. Gingival hypertrophy occurs in less than 5% of patients treated with phenytoin.

The painting on the cover

Australian Prescriber's international readership is growing. To identify the journal as distinctively Australian, the cover features an Australian Aboriginal painting. Jennifer Summerfield, the Aboriginal artist, from the centre of Australia, created the painting in 1998 for National Medicines Week. The central icon is of a gathering of people sitting around a fire, talking. Jennifer's story follows:

I'm Jennifer Summerfield. I am a Pitjantjatjara woman. I live at Umuwa on the Anangu Pitjantjatjara Lands in the north west of South Australia. I work as an Anangu Health Worker for Nganampa Health Council. I am the artist who did the painting for National Medicines Week.

This painting is about using medicine properly, especially for older people. Store your tablets in a cool place or in your bag away from kids and other old people. Take your medication at the right time with the pictures of the sun

showing in the morning, at midday and in the evening. Don't throw your medicines on the ground. If you don't take your tablets you may be blind or never walk again. This is what the painting is about.

The older people in the middle of the painting are keeping their medicine safe in a bag. The people in each corner have not taken their medicines and have become blind or crippled. There is the sun to tell them to take their medicine, in the morning, at midday and in the evening. People at the middle top of the painting are taking their medicines. People down the bottom of the painting sometimes take their medicine and sometimes throw it away. Then young kids can find that medicine and take it and become sick. The two black paintings show that when people don't take their medicine properly, they die. Around the outside of the painting are a few bush medicines.