

a dihydropyridine calcium channel blocker. Compared to the racemic amlodipine, S-amlodipine has 1000-fold stronger affinity to the L-type calcium channels.<sup>[1]</sup> The use of racemic amlodipine is commonly associated with adverse events like peripheral edema headache, dizziness, flushing and abdominal pain, gingival overgrowth or enlargement.<sup>[2]</sup> Controlled clinical trials showed that S-amlodipine is rarely associated with these side effects.<sup>[1]</sup>

Gingival hyperplasia has potential cosmetic implications and provides new niches for the growth of microorganisms. Although the incidence of nifedipine-induced gingival hyperplasia is about 10%, there are few reports of amlodipine-related gingival hyperplasia.<sup>[3-5]</sup> We encountered two patients with this complication.

A 37-year-old man with a case of chronic kidney disease (CKD) stage III was on 5 mg daily dose of S-amlodipine for the past 1.5 years. He developed swelling of gums and was diagnosed S-amlodipine-induced gingival enlargement [Figure 1a]. S-amlodipine was substituted with metoprolol and moxonidine. Discontinuation of S-amlodipine and dental toileting led to resolution at 6 months [Figure 1b].

A 62-year-old woman with a case of CKD stage V was on 10 mg daily dose of S-amlodipine for 1 year. She developed swelling of gums, which used to bleed while eating or cleaning and was diagnosed with S-amlodipine-induced gingival enlargement [Figure 1c]. She refused dental treatment but S-amlodipine was changed to moxonidine. Six months later, she had regression of the gingival enlargement [Figure 1d].



Figure 1: (a) Gingival enlargement due to S-amlodipine and (b) resolution of the gingival enlargement at 6 months after discontinuation of the S-amlodipine; (c) gingival enlargement due to S-amlodipine and (d) resolution of the gingival enlargement at 6 months after discontinuation of the S-amlodipine

## S-amlodipine-induced gingival enlargement

Sir,  
S-amlodipine is the chirally pure, single, pharmacologically active enantiomer of amlodipine,

Phenytoin, calcium channel blockers and cyclosporine commonly cause gingival overgrowth.<sup>[3-5]</sup> Gingival overgrowth may be due to a direct effect of the drug that regresses upon interruption of drug therapy.<sup>[5]</sup> However, it is generally accepted that the inflammatory changes caused by the bacteria biofilm synergize with the drug effect to cause overgrowth of the soft tissues.

Treatment includes mechanical and chemical plaque (bacterial biofilm) control. Gingivectomy of the overgrown tissue is often needed. If the offending drug cannot be replaced, dental prophylaxes (dental cleaning) at 3-month intervals is recommended.<sup>[5]</sup>

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	DOI: 10.4103/0971-4065.144428