Periodontitis and Cardiovascular Diseases

A mutual association

CVDs are responsible for **17.9 million** (one in three) deaths worldwide

In its mild form, periodontitis presents as gingivitis, the inflammation of the gums around the teeth

Severe periodontitis affects **about 750 million** across the world

6th most common non-communicable disease among humans

Periodontal disease or periodontitis is an infection of the tissues surrounding and supporting the teeth

Both these chronic non-communicable diseases are highly prevalent, and patients with periodontal disease have a higher risk of suffering from serious cardiovascular events like a heart attack or stroke

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Evidence suggests a mutual association between periodontitis and CVD.

Individuals with periodontitis have a higher risk of CVD and complications like stroke and myocardial infarctions.

CVD may be a risk factor for the onset and progression of periodontitis.

How are periodontitis and CVD linked?

- Periodontal disease
  - Increases inflammatory cytokines
  - Enhances oxidative stress
  - Can cause significant endothelial dysfunction and dyslipidaemia
  - Can cause bacteraemia

  Promotes systemic inflammation and atheroma formation

  Atherosclerosis increases inflammation and narrows blood vessels, worsening CVD

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Maintenance of oral health should be a focus for both, oral health practitioners and general physicians

- Oral health issues are an easily modifiable risk factor for CVD
- Can be controlled with regular follow-ups and treatment

Unaddressed oral health problems can:

- Aggravate and cause pain in the jaws
- Cause spread of infection and bacteraemia
- Result in tooth loss and difficulty in speech and mastication, as well as compromised aesthetics
- Cause severe medical complications such as pneumonia
- Increase CVD risk

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Both oral health care practitioners and physicians should:

- Educate patients regarding the link between oral and overall health
- Encourage dental hygiene practices among patients
- Encourage regular follow-ups, both dental and medical

Recommendations for oral health care practitioners

- Ensure that you take a thorough medical history of any new patient
- Update medical records of older patients periodically
- For patients with CVD, ensure regular periodontal examinations, maintenance, and treatment as required
- In patients with extensive tooth loss, recommend dental rehabilitation

Take adequate precautions while treating patients with CVD:

- While antibiotic prophylaxis against infective endocarditis is not recommended routinely, antibiotics may be prescribed for patients with a prior history of endocarditis if the procedure is invasive and requires them
- Check blood pressure of patients prior to long treatment
- Ensure treatment and medical compliance

Recommendations for physicians

- Enquire about any previous oral health problems or history
- Provide a referral for a periodontal examination in cases of newly diagnosed CVD
- Liaise with dental surgeons for the periodontal management of patients with CVD on anticoagulant/anti-platelet therapy

Content adapted from:

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