Polyp: Fibro-epithelial polyps, fibrous epulides and denture-induced granulomas

Fibrous nodules are the most common soft tissue swellings of the mouth. They are hyperplastic, reactive swellings that develop in response to chronic minor irritation or trauma. Definitive diagnosis is critical - gingival enlargement could be the primary presentation of potentially lethal systemic diseases.

**DEFINITIONS**

Polyps are hyperplastic fibrous nodules. Polyps are common and present in three common forms:
1. Fibro-epithelial polyp
2. Fibrous epulis
3. Denture-induced hyperplasia / Denture-induced granuloma

Fibro-epithelial polyps are very common, firm, painless swellings found mainly on the inside of the cheeks, lips and tongue. They represent a reactive, hyperplastic, localised response to trauma or local irritation.

A fibrous epulis is histologically the same as an FEP but located on the gingiva. Any FEP located beyond the mucogingival junction is therefore a fibrous epulis. Epulis – literally means 'on the gingiva' and is descriptive of the location only.

Denture-induced granuloma/hyperplasia is similar in origin and structure to the FEP and fibrous epulis, but caused specifically by dentures.

**AETIOLOGY**

Develop in response to trauma/irritation such as:
- Sharp edges of carious teeth
- Poorly fitting dentures
- Calculus
- Chronic infection
- Mucosal damage through cheek biting / mastication

**EPIDEMIOLOGY**

Fibro-epithelial polyps affect all age groups but are rare during the first decade of life. They occur in both genders and specialized forms occur under dentures, along denture edges and on inflamed gingiva. Multiple polyps may raise suspicions of systemic disease.

Denture-induced hyperplasia is usually found in persons aged 40+ in correlation to increased number of denture wearers.

<table>
<thead>
<tr>
<th>Fibro-epithelial polyp</th>
<th>Fibrous epulis</th>
<th>Denture induced hyperplasia</th>
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</thead>
<tbody>
<tr>
<td>Site</td>
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<tr>
<td>Buccal mucosa – cheeks/lips/ lateral tongue</td>
<td>Gingiva. Often between anterior teeth.</td>
<td>Mucosa in contact with edge of denture flange</td>
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<td>Shape</td>
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<tr>
<td>Discrete lesion, sessile or pedunculated</td>
<td></td>
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<tr>
<td>Size</td>
<td></td>
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<tr>
<td>Typically less than 1cm, but can grow to large size</td>
<td></td>
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<tr>
<td>Colour</td>
<td></td>
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<tr>
<td>Pale pink. Usually homogenous with surrounding tissue. Though may appear keratinized or ulcerated through trauma.</td>
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<td>Consistency</td>
<td></td>
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<td>May be firm or compressible on palpation</td>
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HPC / SYMPTOMS

Benign gingival swellings are typically painless unless traumatised. Patients may complain of interference with speech or mastication. Recent trauma, such as biting, may cause minor haemorrhage.

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<tr>
<td>Often painless. May become painful if interference with occlusion in mastication.</td>
<td>Often painless. May become painful due to secondary trauma such as brushing, chewing or flossing.</td>
<td>Low-grade chronic trauma therefore may be relatively pain free.</td>
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APPROPRIATE SPECIAL INVESTIGATIONS

Surgical excision of the mass and microscopic diagnosis to confirm the provisional diagnosis. Giant-cell granuloma, pyogenic granuloma or malignant tumours may present similarly to fibrous epulides.

PATHOLOGY

Fibro-epithelial polyps, fibrous epulides and denture induced granuloma are all benign mesenchymal tumours of oral mucosa. They represent an overgrowth of fibrous connective tissue. The overlying epithelium may become hyperplastic in reaction to trauma, giving the keratinised whitish appearance. This is essentially frictional keratosis.

• Composed of mainly mature fibrous tissue - Type I and III collagen
• Covered by hyperplastic epithelium
• Spiky rete processes
• Inflammatory cells
• May feature underlying bone formation in fibrous epulides

TREATMENT

Remove stimulus – modify sharp tooth, modify / reline / replace denture, advise on denture hygiene.

Reassure patient of the benign nature of the condition.

Excise mass under local anaesthetic with small base of normal tissue from which it arises. If fibrous epulis with bone formation curette underlying bone.

There should be no recurrence if excised correctly and the source of irritation is removed.

May opt for no treatment if symptomless and small. Review at regular GDP.

A pedunculated fibro-epithelial polyp, measuring around 1.5 cm in length, 1 cm in breadth and 0.5 cm in width. The tissue was painless and hindered the patient during speech and mastication.

‘Leaf fibroma- a flat lesions formed between the denture and mucosa, named after their leaf like shape. A probe has been used to demonstrate its pedunculated shape.

References


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