Sialolithiasis

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Salivary gland stones can form in the gland ducts. Patients between the ages of 30 and 60 with sialolithiasis typically pres - ent with cyclical postprandial swelling of the major salivary glands and dryness possibly due to decreased salivary flow . Duct abnormality , inflammation and increased calcium content of the saliva may contribute to an increased risk of sialolithiasis. Chronic dehydration and pharmacological causes of decreased salivary flow are often implicated. The submandibular gland is most commonly a ff ected (85%) owing to the ascending course of its duct, predisposing it to stagnation of the mucinous as well as the more viscous saliva it produces (Figure 54.6). The alka line saliva precipitates calcium and phosphate and predisposes to stone formation. On examination, there is an asymmetrical enlargement of the gland and a large proximal stone may be palpated in certain cases. Submandibular gland duct stones ar e mainly proximal and parotid gland duct stones are mainly distal (Figure 54.7). Sialolithiasis complicated by a secondary bacterial infection may present with an abscess. Conventional radiographs are considered as an initial diagnostic test (Figure 54.8). However, small stones may be - missed and only 80% of stones are radio-opaque. In such cases, computed tomography (CT) scanning, ultrasonography and a magnetic resonance sialogram will be more sensitive for diagnosis and localisation. Sialography is the gold standard for diagnosis and involves injecting a dye into the duct of the salivary gland. It not only helps in diagnosis of sialolithiasis but also identifies any pathology in the duct. In addition, it may be therapeutic in certain cases. Sialendoscopy provides

(b) Figure 54.6 (a) A submandibular gland sialolithiasis. (b) endoscopy with submandibular gland calculus removal (courtesy of Dr /uni00A0 Shirish Ghan, Nasik, India). (b) Figure 54.7 (a) Parotid

gland swelling due to lithiasis and secondary stricture. (b) Sialendoscopic stricture dilatation (courtesy of Dr Shirish Ghan, Nasik, India). Sialo

Figure 54.8 Occlusal view showing a stone in the submandibular gland.

of stones. It is a safe procedure that can be performed under local anaesthesia with better outcomes than open surgery . The smaller (<5 /uni00A0 mm) distal stones can be removed with endoscopy while the larger (>5 /uni00A0 mm) distal stones may require duct slit ting. For an impacted stone, the transoral route is used. Intra parenchymal stones between 5 and 7 /uni00A0 mm can be extracted endoscopically while larger stones require transoral slitting. Stones that are not palpable and not visualised endoscop ically can be remo ved using external shock wave lithotripsy (ESWL). However, ESWL is not suitable for stones larger than 7–10 /uni00A0 mm. Hilar stones are removed using an endoscope. Excision of the submandibular gland should be considered as a last resort. Parotid stones (<7 /uni00A0 mm) can be removed endo scopically and di ffi cult cases might need a combined trans cutaneous approach. ESWL can be considered for impacted stones. Again gland removal should be considered only as a final r emedy . Sialolithiasis

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