INVESTIGATIONS Imaging

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Various modalities, from plain radiography to ultrasonography , CT , MRI and sialography are available to clinicians. In most cases, CT scans are considered superior for di ff erentiating neoplasms from inflammatory conditions, while MRI scans give better di ff erentiation between benign and malignant neoplasms. Ultrasonography is a very useful diagnostic tool, especially for lesions of major salivary glands. Acute inflammatory conditions may be picked up by enlarged glands with increased blood flow , compared with chronic inflammation, in which the glands may be smaller in size and hypoechoic. Sialolithiasis will present with distinct acoustic shadowing. Benign tumours such as pleo morphic adenoma are generally visualised as well-lobulated, hypoechoic lesions with some calcifications. Malignant tumours will have irregular shapes and a hypoechoic, inhomogeneous appearance with blurred margins . However, ultrasonography cannot adequately characterise lesions of the deep lobe of the parotid gland and when there is suspected involvement of the skull base; in these cases, cross-sectional imaging such as CT/ MRI is preferred. Computed tomography/magnetic resonance imaging scans These are the best tools for almost complete imaging of the salivary glands. They detect both cystic and solid masses with good accuracy as well as help in diagnosing and localising sialolithiasis. CT scans are especially useful in determining the extent of the tumour, erosion of surrounding osseous structures, extraglandular involvement and the presence of metastatic nodes. MRI scans, especially di ff usion-weighted (DW) and gadolinium-enhanced dynamic MRI, can di ff eren tiate benign and malignant neoplasms based on the apparent di ff usion coe ffi cient (ADC) values, peak enhancement and washout ratios. Positron emission tomography with computed tomography (PET-CT) scans These scans are used mainly in the detection of distant metas tases in high-grade malignancies or if the salivary glands are involved as the site of metastasis with an unknown primary . INVESTIGATIONS Imaging

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