

Oral and maxillofacial pathology

Oral and maxillofacial pathology refers to the diseases of the mouth (“oral cavity” or “stoma”), jaws (“maxillae” or “gnath”) and related structures such as salivary glands, temporomandibular joints, facial muscles and perioral skin (the skin around the mouth). The mouth is an important organ with many different functions. It is also prone to a variety of medical and dental disorders. The specialty oral and maxillofacial pathology is concerned with diagnosis and study of the causes and effects of diseases affecting the oral and maxillofacial region. It is sometimes considered to be a specialty of dentistry and pathology. Sometimes the term head and neck pathology is used instead, which may indicate that the pathologist deals with otorhinolaryngologic disorders (i.e. ear, nose and throat) in addition to maxillofacial disorders. In this role there is some overlap between the expertise of head and neck pathologists and that of endocrine pathologists. The key to any diagnosis is thorough medical, dental, social and psychological history as well as assessing certain lifestyle risk factors that may be involved in disease processes. This is followed by a thorough clinical investigation including extra-oral and intra-oral hard and soft tissues.

It is sometimes the case that a diagnosis and treatment regime are possible to determine from history and examination, however it is good practice to compile a list of differential diagnoses. Differential diagnosis allows for decisions on what further investigations are needed in each case.

There are many types of investigations in diagnosis of oral and maxillofacial diseases, including screening tests, imaging (radiographs, CBCT, CT, MRI, ultrasound) and histopathology (biopsy).

Biopsy

A biopsy is indicated when the patient’s clinical presentation, past history or imaging studies do not allow a definitive diagnosis. A biopsy is a surgical procedure that involves the removal of a piece of tissue sample from the living organism for the purpose of microscopic examination. In most cases, biopsies are carried out under local anaesthesia. Some biopsies are carried out endoscopically, others under image guidance, for instance ultrasound, computed tomography (CT) or magnetic resonance imaging (MRI) in the radiology suite. Examples of the most common tissues examined by means of a biopsy include oral and sinus mucosa, bone, soft tissue, skin and lymph nodes.

Types of biopsies typically used for diagnosing oral and maxillofacial pathology are:

Excisional biopsy: A small lesion is totally excised. This method is preferred, if the lesions are approximately 1 cm or less in diameter, clinically and seemingly benign and surgically accessible. Large lesions which are more diffused and dispersed in nature or those which are seemed to be more clinically malignant are not conducive to total removal.

Incisional biopsy: A small portion of the tissue is removed from an abnormal-looking area for examination. This method is useful in dealing with large lesions. If the abnormal region is easily accessed, the sample may be taken at your doctor’s office. If the tumour is deeper inside the mouth or throat, the biopsy may need to be performed in an operating room. General anaesthesia is administered to eliminate any pain.

Exfoliative cytology: A suspected area is gently scraped to collect a sample of cells for examination. These cells are placed on a glass slide and stained with dye, so that they can be viewed under a microscope. If any cells appear abnormal, a deeper biopsy will be performed.