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Burkitt's Lymphoma-Of the Jaw Bones

Lymphoma is a heterogeneous malignant disease of the lymphatic system, characterised by a proliferation of lymphoid cells or their precursors, and is the third most common malignancy in childhood. Burkitt's lymphoma is the most common form of Non-Hodgkin's lymphoma, representing approximately 1/3 of these cases.

Burkitt's Lymphoma is the fastest growing human tumor with a 24 hour doubling in size. It is more common in children and young adults, mostly in males, and the most common site will be the mandible. In many cases, the cause of lymphoma is unknown, risk factors vary according to geographic location. However, people who have a medical condition that affects their immune system have a predisposition to develop lymphoma. Patients with acquired immunodeficiency syndrome (AIDS) have a higher risk to develop Non-Hodgkin's lymphoma about 100–200 times the risk of the general population. The most common form is associated with Epstein-Barr virus and the endemic population in Africa, especially in areas with Malaria. The Endemic form typically spreads to extranodal sites like bone marrow and meninges.

The symptoms of endemic Burkitt's lymphoma include swelling and distortion of facial bones and a rapid growth of lymph nodes. The enlarged lymph nodes are non-tender. On a radiograph it looks like a radiolucent destruction of the bone with ill defined margins. The clinical features of Burkitt's lymphoma involving the jaws include severely mobile teeth, displaced teeth and

generalized lymphadenopathy (submandibular, cervical, axillary and inguinal). A clinic subjective would be patient complaining of enlarged gingival tissue of the mandible appearing “overnight”. A diagnosis of Burkitt’s lymphoma begins with a medical history and physical examination and a biopsy of tumors that confirms the diagnosis. On a biopsy it looks like starry sky appearances with only the macrophages and lymphocytes present. The bone marrow and central nervous system are often involved. Bone marrow and spinal fluid are usually examined to see how far the cancer has spread.

Current treatment for Burkitt’s Lymphoma is chemotherapy with more than 90% of patients responding to treatment. If a patient does not receive any treatment it is fatal and the time frame would be 4 to 6 months from the diagnosis time.

Our roles as Dental Hygienist would be to identify and diagnose based on the clinical (subjective and objective) and radiographic findings, give a referral to the patient PCP or Hospital for a biopsy and possibly additional lab tests.. Once confirmed it is indeed Burkitt’s Lymphoma our role is very minimal (prophylaxis) until the patient receives treatment.

Citations:

Comfort AO. Burkitt's lymphoma of the jaws: role of dental practitioner in management. Pac Health Dialog. 2004 Mar;11(1):89-93. PMID: 18181448.

<https://pubmed.ncbi.nlm.nih.gov/18181448/>