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Review Article

Types, prevalence, management, and outcome of maxillofacial tumors

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ABSTRACT

Maxillofacial tumors constitute a diverse group of pathologic disorders with various histological types and clinical behaviours. The causes of head and neck tumors involve a combination of environmental factors and genetic predisposition. Although less frequent in children and adolescents, they still represent approximately 3% to 10% of head and neck tumor cases worldwide. Accurate diagnosis and management are crucial for favourable outcomes. The tumors can be categorized into epithelial, soft tissue, odontogenic, hematologic, and bone tumors, each with distinct characteristics and treatment approaches. The prevalence of these tumors varies based on location, age, and gender. A multidisciplinary approach, including surgery, medical treatments, radiation therapy, and palliative care, is often required for managing these tumors. Prognosis and outcomes depend on tumor type, stage, and individual factors, with early diagnosis and appropriate management contributing to better results. Regular follow-up is essential to detect potential recurrence or metastasis early and provide timely intervention. Individualized evaluation and treatment by qualified medical professionals are vital due to the uniqueness of each case. This review discusses the classification, clinical features, histopathological characteristics, radiographic presentations, treatment options, and prognosis of maxillofacial tumors.

Keywords: Maxillofacial tumors, Diagnosis, Management, Epithelial tumors, Soft tissue tumors, Odontogenic tumors, Hematologic tumors, Bone tumors, Prevalence, Prognosis

INTRODUCTION

Maxillofacial tumors are a diverse group of pathologic disorders with various histological types and clinical behaviour.[1] These tumors might destroy facial bone with a compromise to the airway, digestive system, and adjacent structures when neglected.[2] Various environmental factors like viral infections, chronic malnutrition, trauma, and the use of alcohol and tobacco have been implicated in the development of these

maxillofacial tumors. Furthermore, the genetic makeup of individuals also exerts a notable influence. Studies have proposed that approximately 3% to 10% of head and neck tumors are prevalent among the pediatric and adolescent population on a global scale.[3-5] Maxillofacial tumors can be classified into various types. Epithelial tumors consist of inverted papillomas, squamous cell carcinoma, pleomorphic adenoma, mucoepidermoid carcinoma, sinonasal undifferentiated carcinoma, adenoid cystic carcinoma, basal cell carcinoma, and verrucous carcinoma. Malignant soft tissue tumors include fibrosarcoma, malignant fibrous histiocytoma, angiosarcoma, rhabdomyosarcoma, leiomyosarcoma, Kaposi sarcoma, and liposarcoma. Benign and malignant odontogenic tumors encompass calcifying epithelial odontogenic tumor (CEOT), ameloblastic fibroma (AF), cementoblastoma, odontoma, odontogenic myxoma, ameloblastoma, ameloblastic carcinoma, and adenomatoid odontogenic tumor. Lesions of hematologic origin consist of Hodgkin's lymphoma, Burkitt's lymphoma, plasmacytoma (multiple myeloma), and non-Hodgkin's lymphoma. Bone tumors include Cherubism, Paget's disease, osteoid osteoma, osteoma, juvenile ossifying fibroma, fibrous dysplasia, giant cell tumor (central and peripheral), chondrosarcoma, osteosarcoma, and Ewing's sarcoma. Neuroectodermal tumors such as neurofibroma, schwannoma, and malignant melanoma are among the common neuroectodermal lesions observed in this context.[6] Maxillofacial tumors vary in prevalence based on factors like location, age, and gender. Some tumors are more common in specific regions/age groups and may have slight gender predilection. Management of maxillofacial tumors involves multidisciplinary approach, including surgery, medical treatments, radiation therapy, targeted therapy and palliative care. Specific plan depends on factors such as tumor type, size, location and stage. Prognosis and outcome are influenced by tumor type, stage at diagnosis, treatment success, and individual factors. Early diagnosis and appropriate management can lead to better outcomes. Typically, benign tumors have favourable prognosis, whereas the outcomes of malignant tumors can vary significantly based on their aggressiveness and effectiveness of treatment. Regular follow-up and monitoring are crucial to detecting any potential recurrence/ metastasis early and providing timely intervention.

LITERATURE SEARCH

This study is based on a comprehensive literature search conducted on September 13, 2023, in the Medline and Cochrane databases, utilising the medical topic headings (MeSH) and a combination of all available related terms, according to the database. To prevent missing any possible research, a manual search for publications was conducted through Google Scholar, using the reference lists of the previously listed papers as a starting point. We looked for valuable information in papers that discussed the types, prevalence, management, and outcome of maxillofacial tumors. There were no restrictions on date, language, participant age, or type of publication.

DISCUSSION

Types

Epithelial tumors

Epithelial tumors of maxillofacial region encompass diverse group of neoplasms, each with its own unique clinical and histopathologic features. Epithelial tumors that oral and maxillofacial surgeons deal with include inverted papilloma, squamous cell carcinoma, pleomorphic adenoma, mucoepidermoid carcinoma, sinonasal undifferentiated carcinoma, adenoid cystic carcinoma, basal cell carcinoma, verrucous carcinoma.[6]

lnverted papilloma

It is a benign but locally aggressive nasal tumor that arises from the lateral nasal wall and can extend into the sinuses, particularly the maxillary sinus. It is distinguished by clinical features such as nasal obstruction, drainage, epistaxis, headaches, and visual disturbances. Pain is uncommon but may indicate a possible secondary infection or malignant transformation.[7] From a histopathological perspective, inverted papillomas primarily comprise hyperplastic ribbons of basement membrane-enclosed epithelium that grow inwardly into the underlying stroma. The epithelium consists of multiple layers, consisting of a mixture of squamous or ciliated columnar cells along with mucocytes.[7,8] The recommended approach for treatment is complete surgical excision. If the lesion is not adequately excised, it can result in local recurrence rates ranging from 22% to 50%.

Squamous cell carcinoma

Squamous cell carcinoma (SCC) affecting the jaws and antrum is a relatively common cancer that primarily affects individuals in their sixties and is more prevalent in men. While the exact cause of SCC in these regions is largely unknown, it may be linked to certain carcinogens. Unlike SCC in other head and neck areas, the association of SCC in the paranasal sinuses with tobacco use is weak.[7,8] The clinical presentation of SCC can vary depending on the stage of the disease and the direction of tumor growth. Patients may experience different symptoms affecting the nasal, oral, ocular, facial, and neurological regions. Nasal symptoms can include stuffiness, blockage, a runny nose, and nosebleeds. Oral findings may involve pain in the upper premolar and molar teeth, loosening of teeth, swelling, ulcers, or fistulas in the palate, alveolar ridge, or gingivobuccal sulcus. Ocular features may consist of eyelid swelling, excessive tearing, vision problems, and proptosis. Facial symptoms can arise from the involvement of the sinus's anterior wall, leading to swelling and asymmetry of the

cheeks. Neurological manifestations may occur as the tumor infiltrates the branches of the fifth cranial nerve, resulting in numbness or tingling sensations in the lips or cheeks. Around 10% to 15% of patients may have regional lymph node involvement, commonly affecting the upper jugular, submandibular, and retropharyngeal nodes. Distant metastases at the time of diagnosis are less common.

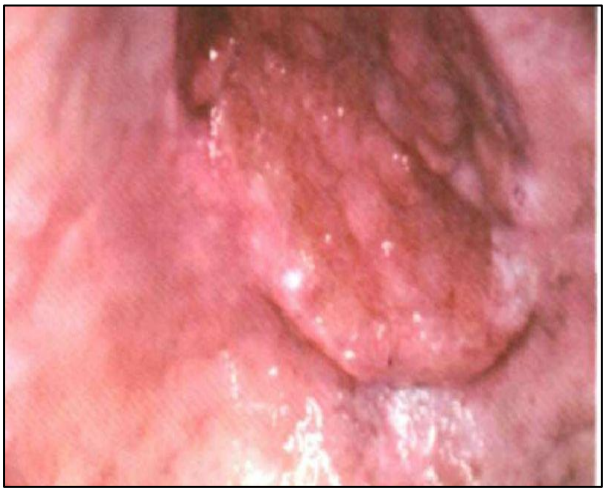

Figure 1: An ulcerated lesion of the hard palate caused by squamous cell carcinoma.[6]

The use of computed tomography (CT) and magnetic resonance imaging (MRI) for radiographic imaging is essential in assessing the disease's extent and aids in determining the most appropriate surgical approach. From a histopathological perspective, the majority of squamous carcinomas are well or moderately differentiated, with poorly differentiated tumors being less prevalent. The usual approach for managing SCC affecting the jaws and oral cavity is to perform block resection with clear margins of 1-2 cm. In some situations, operators may opt for radiotherapy alone or a combination of aggressive surgery and radiotherapy.[9,10] In these regions, despite aggressive treatment, the outlook for SCC remains unfavourable, with a 5-year survival rate of approximately 40%. If metastatic deposits are present in the nearby lymph nodes, the survival rate drops significantly to less than 8%, as does the involvement of the pterygopalatine fossa. For advanced-stage sinus tumors, a common treatment approach involves a combination of surgery and radiation, sometimes with chemotherapy. Local recurrence is a frequent cause of treatment failure and mortality, with most recurrences happening within one to two years of therapy. During the course of the disease, about 25% to 30% of patients may develop positive regional lymph nodes, and 10% to 20% of patients might experience distant metastases.

Pleomorphic adenoma

The most common tumor that affects salivary glands is pleomorphic adenoma.[7] It grows slowly and typically does not cause pain. From a histopathological perspective, it displays diverse cell types, necessitating complete surgical removal to prevent recurrence and reduce the risk of malignancy.[6]

Mucoepidermoid carcinoma

Mucoepidermoid carcinoma, commonly found in the parotid gland and palate, is characterized by the presence of both mucous-producing and squamous cells. The treatment options for this condition include surgery, radiation, and chemotherapy, which are determined by the location and grade of the tumor. The prognosis, on the other hand, varies depending on the grade of the tumor.[6]

Sinonasal undifferentiated carcinoma

Sinonasal undifferentiated carcinoma (SNUC) is an uncommon and highly aggressive tumor that primarily affects the nasal cavity and paranasal sinuses. It typically occurs in older males and spreads quickly to neighbouring areas, such as the nasopharynx and orbit. The symptoms of this condition include nasal congestion, nosebleeds, discomfort, and cranial nerve problems. On radiographic imaging, SNUC appears as a sizable mass in the sinonasal region, often showing signs of bone invasion.[6]

Histopathologically, it shows polygonal cells with pleomorphic nuclei and no differentiation. The treatment necessitates a comprehensive approach involving multiple therapies, but the outlook remains discouraging, with a 5-year survival rate below 20%. Nonetheless, certain medical centres have reported encouraging outcomes by using induction chemotherapy and radiation, followed by surgical intervention.

Adenoid cystic carcinoma

It is a slow-growing mass causing pain and facial nerve paralysis. Radiographically, it exhibits bone destruction.[6]

The main treatment for this condition is surgical excision, and radiation therapy might offer modest survival advantages. Neck dissection is infrequent due to limited lymph node metastasis. Nonetheless, the prognosis remains unfavourable, and caution is advised when considering aggressive surgeries for large tumors or cases with metastasis.

Basal cell carcinoma

Basal cell carcinoma (BCC) is a common skin cancer primarily affecting fair-skinned adults. It presents as slow-spreading lesions on the head and neck.[6] Histopathologically, BCC exhibits diverse appearances. The treatment approach is determined by the size and location of the lesion. Common methods include surgical excision, laser ablation, or curettage. For larger or more aggressive lesions, more aggressive options like radical

surgery and radiation therapy are used. In cases of sclerosing or recurrent tumors, Mohs micrographic surgery is employed to ensure complete removal of the tumor and achieve high cure rates.

Verrucous carcinoma

Verrucous carcinoma (VC) is a well-differentiated form of squamous cell carcinoma characterized by its slow growth and limited tendency to spread to distant areas of the body (non-metastasizing). Common indications of VC include hoarseness, blockage of the airway, weight loss, and throat discomfort. Usually, enlarged lymph nodes are reactive and not indicative of cancerous involvement in most cases.[6] Histopathologically, VC is characterized by thickened club-shaped papillae and intrastromal invaginations. The recommended course of action for treatment includes either surgical removal or radiotherapy, with surgery proving to be more potent in its effectiveness. Radiotherapy is an option for patients who are not eligible candidates for surgical procedures.

Malignant soft tissue tumors

Malignant soft tissue tumors constitute a varied collection of neoplasms, each possessing distinct clinical, histopathological, and immunohistochemical characteristics. Furthermore, their treatment approaches and prognoses vary significantly.

Fibrosarcoma

It typically presents with symptoms related to nasal masses, obstruction, epistaxis, and facial swelling.[11-13] Histopathologically, it exhibits high cellular proliferation with spindle cells forming a herringbone pattern.[6] Although surgery is the most effective approach for treating aggressive fibromatosis, its occurrence in the head and neck area often results in more aggressive behaviour and increased rates of recurrence.

Malignant fibrous histiocytoma

Malignant fibrous histiocytoma (MFH) manifests as nasal blockage and various other symptoms, showing a relatively rare incidence in the head and neck area. From a histopathological perspective, MFH exhibits infiltrative and ulcerative characteristics, featuring spindle to pleomorphic cells arranged in a storiform growth pattern.[6] Immunohistochemistry plays a crucial role in differentiating this condition from other tumors during the diagnostic phase. Typically, MFHs in the head and neck region show a slightly lower rate of recurrence and metastasis compared to those occurring in other areas.[14]

Angiosarcoma

It is a vascular phenotype malignancy, presents with various symptoms including swelling, pain, epistaxis, and nasal obstruction.[15,16] Histopathologically, it shows low-grade features, forming tortuous anastomosing vascular channels.[6] The standard approach for treatment involves a combination of surgical resection, radiation, and chemotherapy. However, recurrence rates are frequently observed.

Rhabdomyosarcoma

It primarily affects children and young adults, exhibiting different microscopic patterns.[6]

Leiomyosarcoma

It is a rare tumor, that presents with swelling and pain, and its histopathology is characterized by intersecting spindle cells and frequent mitoses.[6] Treatment involves surgery, radiation, and chemotherapy, but local recurrence is common.[17,18]

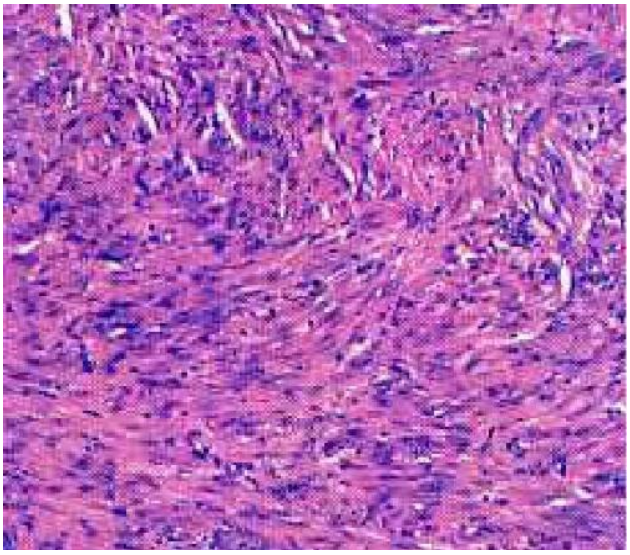

Figure 2: There are fascicles of spindle-shaped cells with noticeable eosinophilic cytoplasm, indicating leiomyosarcoma.[6]

Kaposi sarcoma (KS)

Kaposi sarcoma (KS) is an aggressive tumor associated with HIV and HHV-8 infection. It manifests as purplish, reddish-blue, or dark brown lesions that may ulcerate, commonly seen in the extremities. Early oral KS presents as red or bluish flat lesions, progressing to nodular forms.[6] Histopathologically, vascular proliferation is evident, and immunohistochemistry plays a crucial role in diagnosis. The disease's progression and prognosis depend on its clinical type and extent, and treatment includes surgery, radiotherapy, and chemotherapy, with close monitoring for improved outcomes.[19]

Liposarcoma

It mainly impacts individuals between the ages of 40 and 60, manifesting as gradual, soft growths that may have a

normal or yellowish appearance. Pain is infrequent and typically arises in the later stages of the illness. The neck is the primary location for head and neck liposarcomas, while the tongue and cheek are common sites within the oral region. Histopathologically, the majority of liposarcomas can be categorized into three main groups: well-differentiated liposarcoma/atypical lipomatous tumor, myxoid/round cell liposarcoma, and pleomorphic liposarcoma.[6] The preferred approach for treatment is radical excision, yet the recurrence rates continue to be elevated, with a 5-year survival rate ranging from 59% to 70% and a 10-year survival rate of around 50%.

Benign and malignant odontogenic tumors

Odontogenic tumors comprise a group of lesions arising from the tooth-forming tissues and can be classified into benign and malignant categories.[6] Various benign odontogenic tumors include CEOT, AF, cementoblastoma, odontoma, odontogenic myxoma, and adenomatoid odontogenic tumor.

Calcifying epithelial odontogenic tumor

It is an infrequent tumor that typically occurs in individuals aged 20 to 60 years. It is commonly found within the bone (intraosseous) and more frequently affects the mandible. This tumor manifests as a slowly growing mass in the jaw and displays mixed radiolucent-radiopaque lesions.[20] Histopathologically, CEOT exhibits islands of epithelial cells with eosinophilic cytoplasm.[21] The treatment includes removing the affected area locally, with an approximately 14% chance of the condition recurring.[22,23]

Ameloblastic fibroma

It is another benign odontogenic tumor primarily affecting the posterior region of the jaws. Radiographically, it appears as a well-demarcated radiolucency and is histologically characterized by epithelial strands and spindle-shaped stromal cells.[24] Enucleation and curettage are the preferred treatment options.

Cementoblastoma

It is an uncommon and non-cancerous growth that attaches to the tooth roots, typically observed near the mandibular first molar. In X-ray images, it presents as a dense mass surrounded by the narrow radiolucent border.[6] Treatment involves surgical extraction with the low recurrence rate.

Odontoma (complex and compound)

It is subclassified into compound and complex types. It usually presents asymptomatically and is often discovered incidentally on dental radiograph. [6]

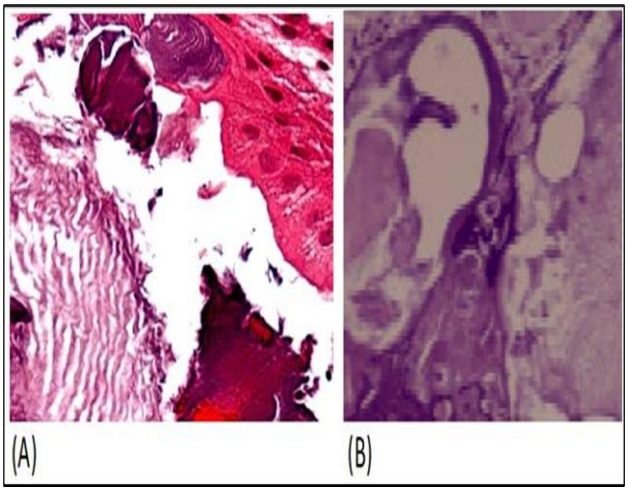

Figure 3 (A and B): Two types of odontoma. Represents a compound odontoma, showing an enamel matrix and odontogenic epithelium within the odontoma. Represents a complex odontoma, where enamel, dentin, and cementum-like tissue are arranged in a disorganized manner.[6] Treatment involves enucleation and curettage, with a good prognosis.

Odontogenic myxoma

It manifests as a painless, enlarging mass in the jaw, and its radiographic appearance shows either single or multiple cavities with trabeculations. Microscopically, it is distinguished by stellate, spindle-shaped, and round cells within a mucoid stroma [6]. Treatment requires complete excision, and recurrence rates are around 25%. *Ameloblastoma is* a locally aggressive tumor occurring exclusively in the jaws, and it may present with radiolucencies resembling cysts. Histologically, it is categorized into different patterns, with the follicular and plexiform patterns being the most frequently observed. Treatment options range from enucleation to radical resection, with recurrence rates reported up to 15%.

Ameloblastic carcinomas

They are malignant counterparts of ameloblastomas and demonstrate a higher risk of metastasis and tumor-related deaths. Adequate surgical excision is crucial, and prognosis varies depending on the site and extent of the tumor.

Adenomatoid odontogenic tumor (AOT)

It is found either in connection with unerupted permanent teeth or as a radiolucent lesion with a single compartment. Histologically, it is composed of spindle-shaped epithelial cells forming tubular structures. AOT is benign and can be effectively treated with enucleation, with low recurrence rates.

Lesions of hematologic origin

Hematologic lesions encompass various conditions such as Hodgkin's lymphoma, Burkitt's lymphoma, Plasmacytoma (multiple myeloma), and Non-Hodgkin's lymphoma.[6] Hodgkin's lymphoma primarily affects lymph nodes but may rarely involve the oral cavity. It can be classified into nodular lymphocyte-predominant Hodgkin's lymphoma and classic Hodgkin's lymphoma, with distinct histopathologic features**.** The treatment plan varies according to the extent of the condition, encompassing the use of radiotherapy and multiagent chemotherapy.

Burkitt's lymphoma

It is a highly aggressive cancer that primarily targets the jaws, especially among children residing in Central Africa. It manifests as a rapidly developing tumor with a unique histopathological pattern is known as the "starry-sky" appearance. The treatment encompasses intensive chemotherapy protocols, and the outlook has become more favourable with the implementation of high-dose cyclophosphamide.

Plasmacytoma

It refers to a clonal neoplastic overgrowth of plasma cells, typically originating within the bone. It may be present in the head and neck region, including the jaws. The treatment includes the use of radiation therapy, but patients could potentially develop multiple myeloma over time.

Non-Hodgkin's lymphoma

It has the potential to affect the paranasal sinuses, leading to bone destruction and spreading to nearby structures. Additionally, individuals with AIDS-related non-Hodgkin's lymphoma may exhibit oral lesions. The treatment includes radiotherapy and/or systemic chemotherapy, with prognosis varying based on subtype and disease stage.

Bone tumors

Bone tumors are a diverse group of conditions that can arise in the skeletal system, and they present a significant challenge in clinical practice. In this discussion, we have explored various bone tumors, including cherubism, Paget's disease, osteoid osteoma, osteoma, juvenile ossifying fibroma, fibrous dysplasia, giant cell tumor, chondrosarcoma, osteosarcoma, and Ewing's sarcoma.

Cherubism

It is an uncommon, inherited condition passed down through autosomal dominant genes, characterized by the bilateral enlargement of the mandible and sometimes the maxilla. It predominantly affects males and is typically evident in early childhood. The clinical presentation includes a symmetrical and painless facial deformity, reminiscent of cherubic faces, and may also involve potential eye displacement. Radiographically, the condition displays soap bubble-like multilocular radiolucencies, along with displaced teeth and tooth germs. Histopathologically, the presence of multinucleated osteoclast-like giant cells within a fibroblastic stroma is observed. As puberty sets in, the lesions may stabilize, and individuals might opt for cosmetic surgery to address any remaining facial deformities.

Paget's disease

It is a medical condition marked by abnormal bone breakdown and deposition, leading to bone deformities and decreased strength. The exact cause remains uncertain, but genetic factors might contribute to its development. Approximately 17% of patients experience jaw involvement, leading to enlargement of the middle part of the face, nasal blockage, and changes in teeth positioning. Radiographically, a distinctive "cotton wool" appearance of bone can be observed. On a histopathological level, the bone exhibits uncontrolled cycles of resorption and formation. Treatment involves managing symptoms, and prognosis varies based on disease extent.[6]

Osteoid Osteoma

It is a non-cancerous bone tumor connected with night-time pain that is alleviated by salicylates. It is infrequent in the head and neck region, featuring a radiolucent nidus surrounded by dense cortical sclerosis. Histologically, it shows osteoid surrounded by osteoblasts. Treatment involves local excision or curettage with a good prognosis.

Osteoma

It is a non-cancerous growth consisting of fully developed dense or spongy bone tissue, commonly located in the craniofacial region. Most cases are asymptomatic, and treatment may involve surgical removal if required for cosmetic or functional reasons.

Juvenile ossifying fibroma

It has two patterns: trabecular and psammomatoid. It is a locally aggressive lesion with a predilection for the paranasal sinuses and facial bones. The treatment consists of surgically removing the tumor, and the likelihood of recurrence varies depending on the type of tumor

Fibrous dysplasia

It is a non-malignant condition resembling a tumor that occurs during development. It is characterized by the substitution of normal bone with fibrous tissue and

irregular bony trabeculae. There are two forms: monostotic (affecting a single bone) and polyostotic (involving multiple bones), each presenting with different clinical and radiographic features. Treatment approaches are determined by the extent and severity of the lesions.

Polyostotic fibrous dysplasia

It is a relatively uncommon disorder marked by the presence of two or more affected bones. When it is accompanied by cafe au lait pigmentation and multiple endocrinopathies, it is known as McCune-Albright Syndrome. Histopathologically, irregular woven bone trabeculae are observed within a cellular fibrous tissue stroma. The treatment and outlook depend on the size and location of the lesions, and surgical reduction is often undertaken for cosmetic or functional improvement. However, there is a possibility of regrowth over time.

Giant cell granuloma

It is an expansive growth distinguished by cellular fibrous tissue, the presence of hemosiderin deposits, and the occurrence of multinucleated giant cells. Treatment involves enucleation or curettage, and recurrence rates are variable.

Chondrosarcoma

It is a cancerous growth that generates cartilage tissue. It presents as a painless mass or swelling with variable radiographic appearances**.** Treatment involves radical surgical excision with adjuvant therapy.

Osteosarcoma

It is another malignant tumor that produces osteoid. It affects the maxilla and mandible with varying radiographic features. The treatment approach consists of administering neo-adjuvant chemotherapy first, followed by radical surgical excision, and concluding with adjuvant chemotherapy. The prognosis depends on tumor extent and response to treatment.

Ewing's sarcoma

It is a rare, aggressive tumor composed of small round cells with high mitotic activity. Treatment involves complete surgical excision, and the prognosis is relatively poor, especially for sinonasal lesions.

Neuroectodermal tumors

Neuroectodermal tumors encompass neurofibroma, schwannoma, and malignant melanoma. Neurofibroma is a non-cancerous growth composed of different cellular elements, whereas schwannoma is an encapsulated benign tumor arising from specialized Schwann cells. On the other hand, malignant melanoma is the most aggressive form and frequently arises in the head and neck area. Diagnosis of these conditions relies on clinical features, histopathology, and immunohistochemistry. Surgical removal is the standard treatment, and the prognosis is influenced by the tumor stage and depth of invasion.[6]

Neurofibromas

They are characterized by a mixed phenotype and present with symptoms like epistaxis, rhinorrhoea, swelling, and pain. Histopathologically, they exhibit paucicellular lesions composed of spindle cells with wavy nuclei, myxoid stroma, and mast cells. The prognosis for neurofibromas is generally good, as they are benign with a low recurrence rate, although a small percentage may undergo malignant transformation.

Schwannomas

They are encapsulated, composed of Antoni A and B areas, and exhibit strong immunoreactivity for S100 protein. Their clinical presentation involves various symptoms depending on the location. Treatment and prognosis for schwannoma are favourable, as they are typically benign with a low recurrence potential.

Malignant melanoma

This tumor is highly aggressive and commonly located in the head and neck region, presenting symptoms like nasal blockage, nosebleeds, and pain. Under histopathological examination, it reveals diverse cell types, pleomorphic nuclei, and melanin pigment. Immunohistochemistry plays a crucial role in diagnosing it, as it shows positive staining for S100 protein, vimentin, and melanocyte markers. Surgical excision is the primary treatment, and the prognosis relies on the disease stage and depth of invasion.

CONCLUSION

The presented information provides an overview of various tumor types and lesions related to different anatomical locations. Each tumor type exhibits distinct clinical, histopathological, and immunohistochemical features, necessitating specific treatment approaches. Early diagnosis, appropriate treatment, and regular follow-up are crucial for achieving better outcomes in the management of these tumors. However, it is essential to consult with qualified medical professionals for an accurate diagnosis, personalised treatment plans, and a prognosis.

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