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RESEARCH ARTICLE

EXTENSIVE SQUAMOUS CELL CARCINOMA OF THE NASOPHARYNX REVEALED ATYPICALLY BY TRISMUS: A RARE CASE REPORT

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Abstract

Nasopharyngeal carcinomas (NPC) are relatively common in the Mediterranean region, which represents an area of intermediate endemicity for these cancers. NPCs are primarily undifferentiated carcinomas (lymphoepithelial), squamous cell carcinomas, and lymphomas. They all originate from the epithelial cells that line the surface of the nasopharynx. Non-keratinizing squamous cell carcinoma is associated with the Epstein-Barr virus (EBV). It accounts for 60% of all NPCs in adults. This is an aggressive cancer that tends to spread rapidly to adjacent tissues and lymph nodes. Imaging is used to define the extent of the disease, particularly at the base of the skull. MRI is the reference examination for assessing invasion of the skull base and perineural spread, while PET-CT is preferred for identifying nodal and distant metastases.

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Introduction:-

Radiotherapy is the cornerstone of treatment. Its combination with chemotherapy has shown benefits in locally advanced forms. We report a rare histological case of NPC, characterized as poorly differentiated and non-keratinizing squamous cell carcinoma.

Case report:

Ms. B.H. was admitted to our unit in June 2023. She is a 53-year-old woman with no significant medical history who presented with non-febrile trismus two weeks prior to admission, without otological, rhinological, or neurological signs, occurring in the context of apyrexia and general condition deterioration. On ENT examination, cervical palpation did not reveal lymphadenopathy. Nasofibroscope showed irregular thickening of the superior and postero-lateral left wall of the nasopharynx, with displacement of the contralateral pharyngeal wall.

A biopsy concluded with an infiltrating poorly differentiated non-keratinizing squamous cell carcinoma. (Figures 1, 2) On the biological level, the patient presented with bicytopenia, with white blood cells: 2300/ μ l and platelets: 73000/ μ l. A cervical CT scan was performed, revealing infiltration of the left parapharyngeal region with a dense appearance of the parapharyngeal fat, without any identifiable collection. This thickening extends from the nasopharynx to the hypopharynx, with no identifiable cervical lymphadenopathy. (Figure 3)

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The laryngeal magnetic resonance imaging (MRI) revealed the presence of thickening and tissue infiltration of the superior and left posterolateral walls of the nasopharynx, effacing the mucosal contours, with intermediate T2 signal, mild diffusion hyperintensity, and heterogeneous enhancement after Gadolinium injection. This mass infiltrates externally into the levatorveli palatini muscle, the pharyngobasilar fascia, the parapharyngeal space, and the ipsilateral pterygoid space, reaching the prevertebral space posteriorly while remaining distant from the choanae anteriorly. It respects the sphenoid sinus without intracranial extension and, inferiorly, fills the left vallecula and bulges into the oropharynx La tumeur a été classée T4N0Mx. (Figure 4) The treatment consisted of exclusive radiotherapy following the Butter protocol: 66 Gy (30 × 2.2 Gy) and 54 Gy (30 × 1.8 Gy).

Discussion:-

Nasopharyngeal carcinoma (NPC) most commonly originates in the Rosenmüller fossa. The tumor spreads contiguously, often infiltrating the mucosa or growing predominantly in the submucosa, invading adjacent structures such as the nasal cavities, the lateral walls of the oropharynx, and the parapharyngeal space (4). Significant lymph node involvement (N2 or N3) is frequently associated, reflecting the lymphotropic nature of these cancers. The reported incidence of lymph node involvement varies between 33.3% and 69% according to the literature (5,6). Metastatic vertebral involvement in nasopharyngeal cancer is well-documented (7,4,8). However, direct contiguous invasion, particularly at the C1-C2 level, has never been reported in the literature. The TNM classification system aims to guide therapeutic strategies, establish prognosis, and assess treatment outcomes to ensure optimal patient management. In recent years, there has been a progressive improvement in NPC survival rates, particularly in Morocco, due to enhanced multidisciplinary management and therapeutic protocols, notably concurrent chemoradiotherapy (5).

According to the study by Chen et al. (9), the 5-year overall survival rate for T3 and T4 tumors was 69.12% and 58.96%, respectively, with a significant difference ($p=0.035$). Similarly, survival rates for N2 and N3 stages were 74% versus 29.4% ($p=0.0009$). The TNM stage has been identified as a major prognostic factor, considering tumor volume, lymph node involvement, and metastases (5,10,11). Modern imaging techniques, particularly MRI with cis sequences and fat saturation, provide superior resolution of the spinal canal and neural structures. Moreover, PET-CT has revolutionized the diagnostic approach for head and neck cancers.

In some institutions, PET-CT is now the first-line imaging modality, replacing CT or MRI, especially for NPC due to its high metastatic potential (8). The primary treatment for NPC is radiotherapy, as achieving complete surgical resection is often impossible due to the tumor's deep anatomical location near the skull base (5,12,13,14). Additionally, these tumors, particularly undifferentiated carcinoma of the nasopharyngeal type (UCNT), are highly chemosensitive, which forms the basis for combining chemotherapy with radiotherapy in treatment protocols (6,10). Concurrent chemoradiotherapy has demonstrated superiority over radiotherapy alone and adjuvant chemotherapy, improving the 5-year overall survival rate by 4-6%. It is now considered the gold standard for treating advanced-stage NPC (15,16,17).

Conclusion:-

Nasopharyngeal carcinomas represent a public health concern due to their therapeutic and prognostic implications. The most influential prognostic factors affecting overall survival include tumor volume, lymph node involvement, TNM stage, concurrent chemoradiotherapy, and radiotherapy fractionation. Overall survival in NPC has improved significantly, particularly with the advent of concurrent chemoradiotherapy. However, debilitating late toxicity remains a considerable concern.

Competing interests:

The authors declare no competing interests.

Authors' contributions:

SE wrote the article. BH, MB and JO have reviewed the literature. NE is responsible for the corrections. All authors have read and approved the final manuscript.

Figures:
Figure 1:

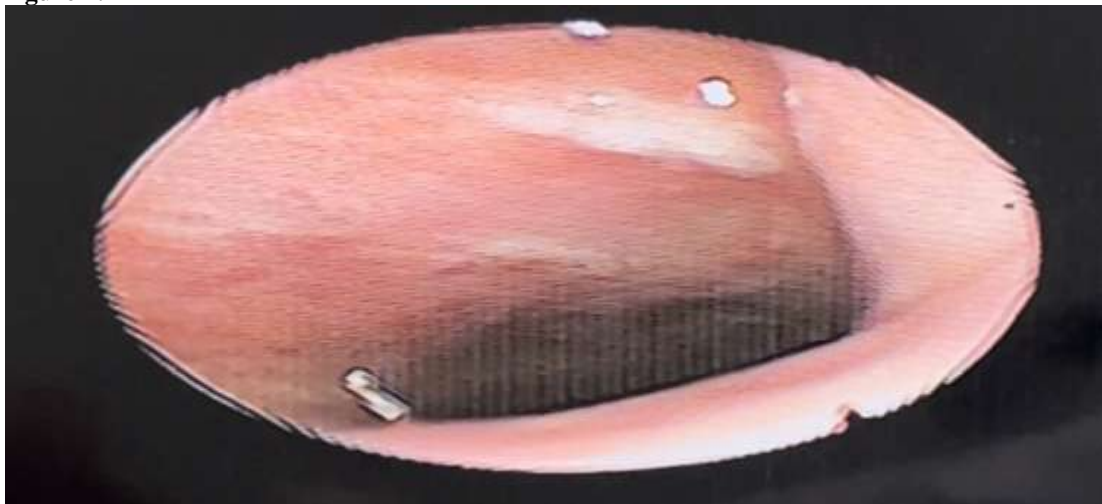


Figure 2:

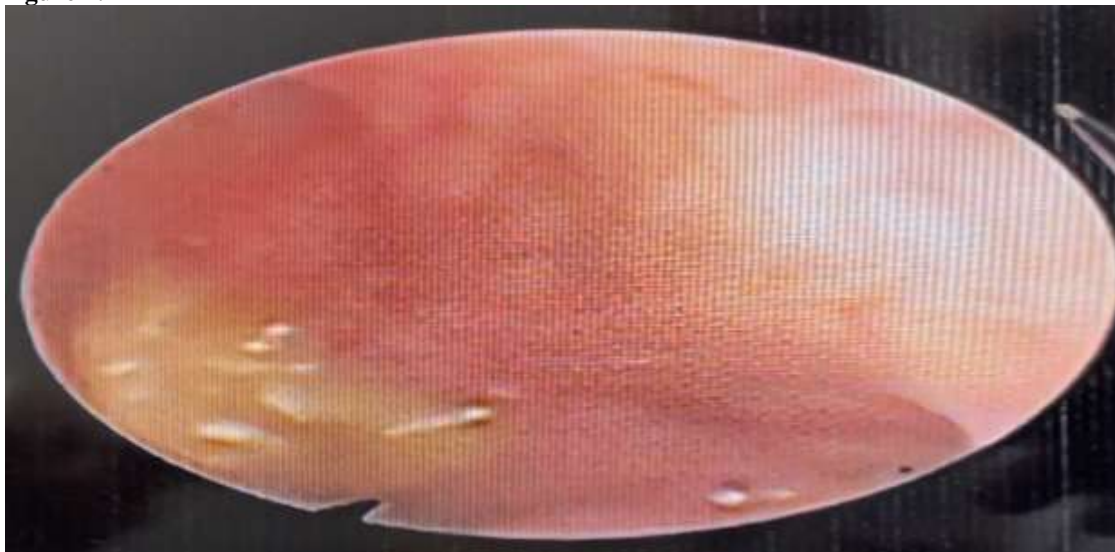


Figure 3:

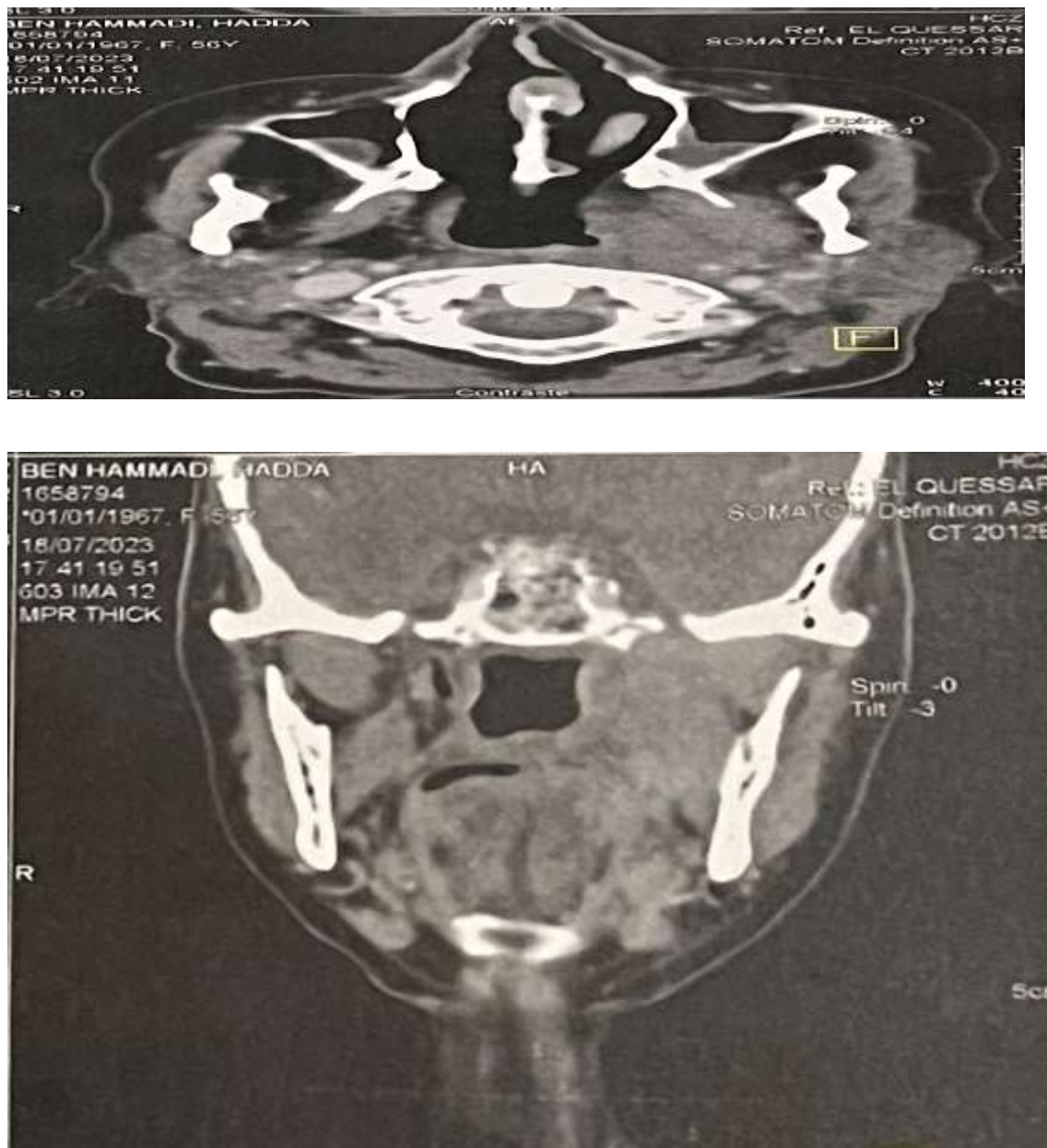
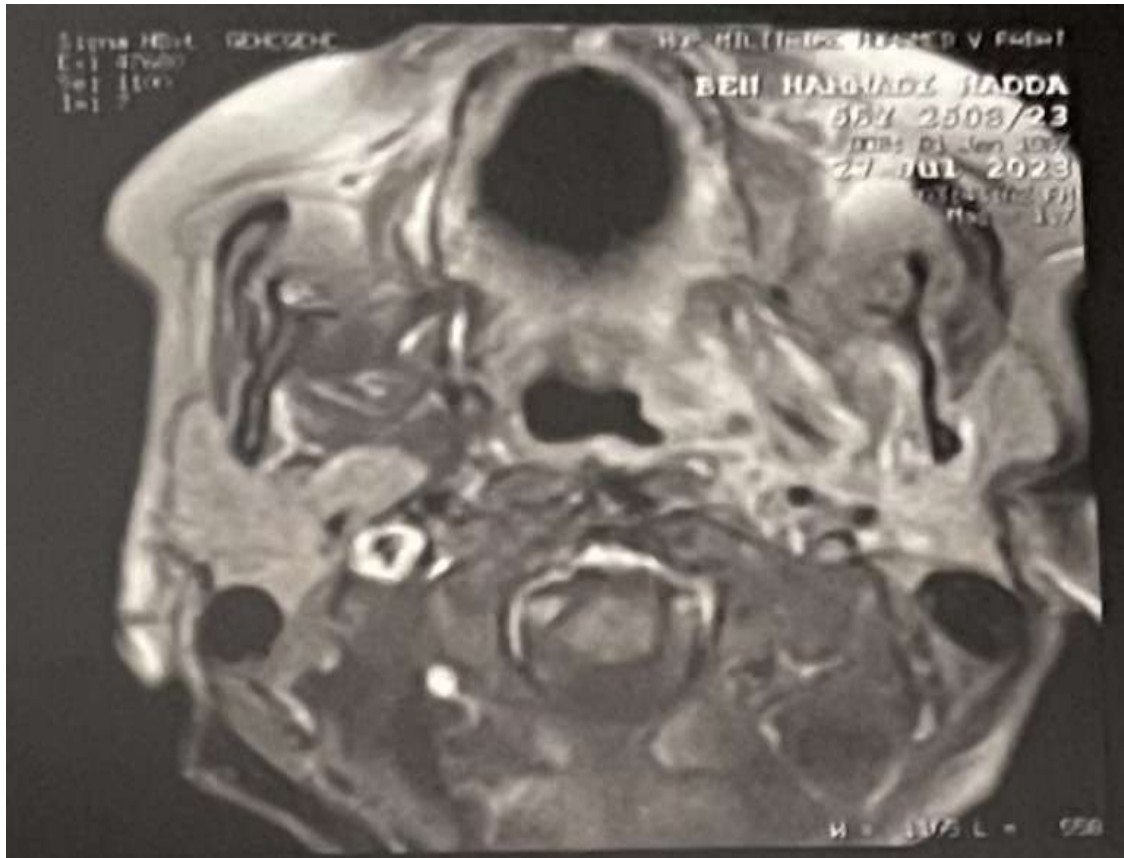


Figure 4:



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