Original Research Paper

Volume - 15 | Issue - 07 | July - 2025 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar

Otrhinolaryngology

A RARE CASE OF EWING'S SARCOMA ARISING FROM THE NASAL BONE

Dr Archana MP — Junior Resident, Department Of Otrhinolaryngology, Shridevi Institute Of Medical Sciences And Research Center.

Dr Sowmya Santhosh — Assistant Professor, Department Of Otorhinolaryngology, Shridevi Institute Of Medical Sciences And Research Center.

Dr Satish K U — Senior Resident, Department Of Otrhinolaryngology, Shridevi Institute Of Medical Sciences And Research Center.

ABSTRACT Ewing's sarcoma is a rare, malignant tumor that predominantly arises in long bones and is the second most common primary bone cancer in children. However, its manifestation in the head and neck region, particularly from nasal bone, is exceptionally rare, accounting for only 2–7% of cases. We present a case of a 25-year-old male who reported progressive swelling over the root of the nose, epistaxis, and anosmia. A thorough diagnostic workup, including nasal endoscopy, biopsy, PET-CT scan, immunohistochemistry, and fluorescence in situ hybridization (FISH), confirmed the diagnosis of Ewing's sarcoma localized to the sinonasal region. The patient underwent three cycles of chemotherapy with a planned total of 20 cycles, followed by radiotherapy. Remarkably, clinical symptoms improved with a noticeable reduction in swelling, and no evidence of metastasis was detected. This case highlights the importance of considering Ewing's sarcoma in the differential diagnosis of sinonasal masses, despite its rarity in this region. Early diagnosis and a multimodal treatment approach are critical for achieving favorable outcomes.

KEYWORDS : Ewing's Sarcoma, Sinonasal Region, Nasal Bone

INTRODUCTION:

Ewing's sarcoma is a rare malignant tumour that typically begins in bones and is most common in children and young adults. Although rare, it is the second most common malignant bone tumour in children after osteosarcoma. Ewing's sarcoma usually affects long bones, such as the femur, tibia, and humerus. Tumours occurring in the head and neck region are uncommon, accounting for only 2-7% of cases. Mandible and maxilla are the most common sites, whereas involvement of the sinonasal tract is very rare[1]. Involvement of the sinonasal tract is extremely rare. Ewing sarcoma is a highly aggressive cancer, with a survival of 70-80% for patients with standard-risk and localized disease and ~30% for those with metastatic disease[2] .This report presents a rare case of Ewing's sarcoma arising from the nasal bone

METHODS:

Patient History: A 25-year-old male presented with swelling over the root of the nose for the past month, progressively increasing in size. He also reported three episodes of bleeding from both nostrils within a month and a loss of smell.

Physical Examination:

1. Swelling at the root of the nose.
2. Widening of the nasal bridge, non-tender, with normal skin over the swelling.
3. Mass in the left nasal cavity, which bled on touch and was firm in consistency.

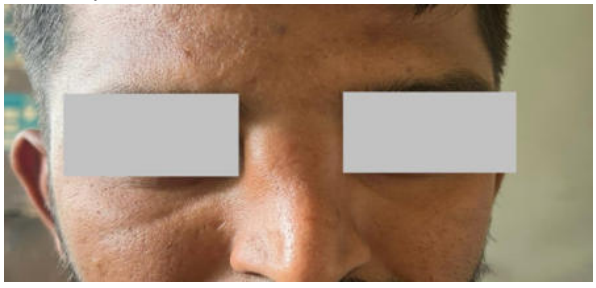

Fig 1: Shows widening of the nasal bridge

INVESTIGATIONS:

1. Diagnostic Nasal Endoscopy: Revealed a polypoidal mass in the left nasal cavity involving the middle meatus.
2. Biopsy: Showed poorly differentiated malignancy.
3. PET-CT Scan: Showed hypermetabolic soft tissue mass lesion involving bilateral nasal cavities, raising concerns of a neoplastic etiology.
4. Immunohistochemistry: Indicated characteristics of adamantinoma-like Ewing's sarcoma.
5. Fluorescence in Situ Hybridization (FISH): Positive for the ESWR1 gene rearrangement, confirming the diagnosis of Ewing's sarcoma.

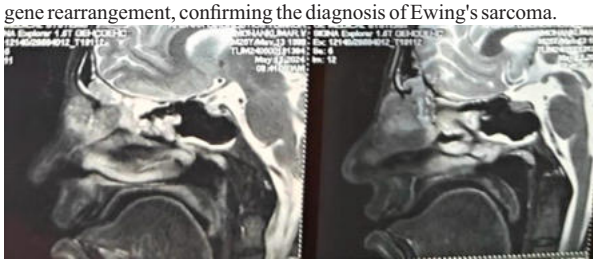

Fig 2: T1 Shows Heterogenous Hypointense Lesion Noted In The Left Nasal Cavity

RESULTS:

- The patient was diagnosed with Ewing's sarcoma following a series of tests. He was treated with 3 cycles of chemotherapy and is scheduled to receive 17 additional cycles, followed by radiotherapy. There has been a noticeable reduction in swelling, and the patient is showing symptomatic improvement.
- Diagnostic nasal endoscopy done after 4 cycles of chemotherapy shows , Choana – clear , Inferior turbinate – normal , Middle turbinate – inflamed , No residual lesion seen
- Tumors responded to chemotherapy and has resolved.

DISCUSSION:

Ewing's sarcoma is the second most frequent bone tumor in children and adolescents. It is known to be a highly aggressive cancer with a survival rate of 70-80% for patients with localized, standard-risk disease, but only ~30% for those with metastatic disease. A good prognosis is expected when the disease is localized and has not metastasized. Treatment typically involves chemotherapy, followed by radiotherapy or surgical excision, depending on the case. This rare case of Ewing's sarcoma arising from the nasal bone presents an unusual clinical manifestation, highlighting the importance of early diagnosis and prompt treatment, which can lead to favorable outcomes in the absence of metastasis.

CONCLUSION:

Although Ewing's sarcoma is most commonly associated with long bones, it can also involve other areas, including the sinonasal region. Early detection and timely treatment offer a good prognosis, particularly when the disease has not metastasized. This case demonstrates the rarity of Ewing's sarcoma affecting the nasal bone and bilateral nasal cavities and emphasizes the need for vigilance in

diagnosing such rare occurrences.

REFERENCES

1. Yeshvanth SK, Ninan K, Bhandary SK, Lakshinarayana KP, Shetty JK, Makannavar JH. Rare case of extraskeletal Ewings sarcoma of the sinonasal tract. J Cancer Res Ther. 2012 Jan-Mar;8(1):142-4.
2. Grünewald TGP, Cidre-Aranaz F, Surdez D, Tomazou EM, de Álava E, Kovar H et al. Ewing sarcoma. Nat Rev Dis Primers. 2018 Jul 5;4(1):5