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The Cancer Control Challenge:
Better Understanding It to Better Face It

NUT CARCINOMA OF THE NASAL CAVITY AND ORBIT IN A PEDIATRIC PATIENT: CASE REPORT

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Introduction: NUT carcinoma is a rare, aggressive and poorly differentiated neoplasm characterized by chromosomal rearrangement of the NUTM1 gene. It mainly affects midline structures, such as the head, neck and mediastinum, and is associated with an extremely poor prognosis. Diagnosis is challenging and treatment often has limited success. **Objectives:** To report a case of NUT carcinoma in a pediatric patient with involvement of the nasal cavity and orbit, highlighting the clinical evolution, therapeutic difficulties and transition to palliative care. **Case Description:** A 9-year-old male patient was diagnosed on November 19, 2024, with NUT carcinoma originating in the nasal cavity and right orbit. He presented progressive growth of the tumor mass in the middle third of the face on the right, exophthalmos on the right, and marked facial asymmetry. His secondary diagnosis was Autism Spectrum Disorder, which justified self-harm behaviors in the right eye. A computed tomography scan of the face showed a solid, expansive, and infiltrative lesion involving ethmoid cells, right orbit, nasal cavity, and right maxillary sinus, with bone erosion and cervical lymph node enlargement. The diagnosis was confirmed by histopathology and immunohistochemistry. Bone marrow biopsy revealed mild to moderate lymphoplasmacytosis, without neoplastic infiltration. Systemic staging was negative for distant metastases. The patient underwent emergency cytoreduction with vincristine, followed by the VACTC and ICE (without etoposide) chemotherapy protocols. There was significant progression of the disease, with an increase in facial mass, severe exophthalmos, self-inflicted ulceration, cervical lymphadenopathy, daily fever and severe pain. Laboratory tests showed progressive anemia, leukopenia, thrombocytopenia, elevated C-reactive protein (up to 211 mg/L) and lactic dehydrogenase (up to 1,701 U/L). Family meetings were held and palliative care was chosen. Symptomatic control was achieved with continuous infusion of morphine and midazolam, associated with rescue doses. The patient died in the ward, under comfort measures. **Conclusion:** The case illustrates the aggressiveness of NUT carcinoma in pediatric patients and the difficulties in diagnosing and managing this neoplasm, due to its nonspecific manifestations and

resistance to conventional therapies. Despite intensive treatment, progression was inevitable, highlighting the need for early integration of palliative care to improve quality of life in the terminal phase.

Keywords: NUT carcinoma; pediatric oncology; midline tumors; palliative care.