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Educational Abstract

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CT and MRI Findings of Congenital Malignant Triton Tumor of the Scalp in a Neonate Unaffected by Neurofibromatosis

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Malignant triton tumor (MTT) is a very rare subtype of malignant peripheral nerve sheath tumor (MPNST) with rhabdomyoblastic differentiation. MTT occurs more frequently in patients with Neurofibromatosis type 1 (NF1), however, sporadic non-NF-1 MTT cases have also been reported in the literature. Imaging techniques and findings of MTT were rarely documented. We reported a case of a 12 day-old neonate who had neither family history nor clinical signs of NF1, presented with a gradually enlarging left temporal mass which was noted since birth. Computed tomography (CT) scan and magnetic resonance imaging (MRI) were performed for therapeutic plannings. Head CT showed soft tissue density tumor on the left temporal region with erosions of underlying cranial bones. MRI showed a large T2WI high intensity capsulated tumor with hemorrhagic components. Diffusion weighted Image (DWI) and Apparent Diffusion Coefficient (ADC) map showed peripherally dominant restricted diffusions. CT and MRI findings were correlated with histopathological diagnosis including immunostaining which confirmed the diagnosis of MTT. The patient underwent multiple tumor removal surgeries, with recurrent, more progressive growth of tumor on the same area following each surgery. The objective of this report is to document serial CT and MRI findings of the patient throughout the course of multiple surgeries and provide better understanding of MTT imaging features.