Non-accidental Trauma, A Mimicker of Neoplasm In Pediatric Patients

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Background:

The younger pediatric patients are unable to verbalize their symptoms and are dependant on their caretakers to provide history. In this scenario, child abuse cases may be misdiagnosed if a purely histological approach is used. This 3 month-old male presented with a two-day history of decreased activity, somnolence and appearing "blue".

Design:

Preoperative, intraoperative and postoperative clinical information was conveyed by the surgeon and oncologist to the pathologist. H&E frozen and permanent sections of the lesion and immunohistochemical stains were performed. Radiological studies were reviewed.

Results:

Physical examination showed decreased perfusion and rapid deterioration to paraparesis. Abnormal laboratory values were hemoglobin of 9.2 g/dl and albumin of 2.6 g/dl. Radiological workup revealed a lumbar spinal lesion that infiltrated into the paraspinal muscles. An emergent neurosurgical exploration was performed to relieve the spinal cord compression and to biopsy the lesion. Intraoperative clinical impression was rhabdomyosarcoma versus lymphoma. The frozen section impression of "atypical cellular infiltrate, suspicious for a neoplastic process" was not supported by permanent sections and immunohistochemical stains.

Due to the persistent clinical suspicion of a malignant process, two external pathological consultations were initiated. Additional radiological studies revealed fractures in both clavicles and several ribs, which were supportive of non-accidental trauma. Child Protective Services was informed and the child was placed under the care of a relative. The final histologic diagnosis was "histiocytic panniculitis". The child thrived after separation from his biological parents. His cognitive function and social development improved significantly. There was resolution of the lesion, healing of the fractures and no evidence of a neoplastic process at 20 months.

Conclusion:

Since most cases of child abuse do not require surgical biopsy, surgical pathologists may not be aware of the histological features of non-accidental trauma in children. Recognition of child abuse as a cause of soft tissue mass is vital to (a) avoid potential diagnostic pitfalls and unnecessary therapy; (b) provide adequate treatment of injuries; (c) prevent repeated occurrences; and (d) ensure proper follow-up of the victims and counseling for the families. A multidisciplinary approach and timely communication among the specialists led to the appropriate management of this patient.