Infantile Digital Fibromatosis- Surgical Indications

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Introduction: Infantile digital fibromatosis (IDF) was first described by Reye in 1965 as involving the fingers and toes exclusively. This is a rare, benign tumor that affects the distal digits on the dorsal or border surfaces. The pink, smooth surfaced tumor can present in a nodular pattern or as individual tumors on neighboring digits as kissing lesions. Demonstrating a predictive histology, the tumor appears as with eosinophilic inclusion bodies with spindle-like fibroblasts. The other key finding is dense sheets of small actin filaments. IDF has a very high potential for recurrence, several studies quoting up to 60%. This potential makes surgical management challenging. Further, the tumor has been reported as regressing, increasing the challenge of determining surgical necessity. This project reviews the English publications on management of this rare entity and hopes to elucidate more clear guidelines to surgical indications.

Methods: Literature review via PubMed search engine was performed. In addition, a case presentation is reviewed with the patient’s recovery course following the guidelines established for surgical excision.

Results: The main results of the study demonstrate there are no clear guidelines on when surgical intervention should be performed. There are currently vague descriptions when intervention has been suggested. Reviewing the literature and management of multiple cases has led to some conclusions for management.

Discussion: Infantile Digital Fibromatosis is a rare benign tumor of children. This case demonstrates the need to further understand the pathology as it affects the normal anatomy. Significant complications can arise in the digit of a child that may need additional reconstructive procedures in the future if intervention is not pursued early in the tumor’s presentation. Although spontaneous regression can occur in 3mo-5 years after the presentation of the lesion, a deformity could have arisen. Thus, in support of the literature observation is recommended for 6 months, then consider intervention based on the criteria listed below.

Mass should be excised when:
1) Size exceeds 1.5 x 1.5 cm squared, or increased progression in size over a 6-month period
2) Loss of range of motion at joint involved, usually DIP
3) Tendon or ligament involvement
4) Deformity of digit or contracture
5) Patient hygiene is compromised

References:
1. Reye RDK. Recurring digital fibrous tumors of childhood. Arch Pathol 1965; 80:228-231