Pediatric Cranial Intraosseous Hemangioma: A Review

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Introduction

Hemangiomas are benign, slow-growing tumours composed of sinusoidal blood vessels. Skeletal hemangiomas are uncommon and are mostly vertebral, followed by cranial in location. Cranial hemangiomas are very rarely encountered in children.

Methods

Authors report a 12-year girl who presented with a painless enlarging mass over the parietal scalp for 3 months. Imaging revealed a left parietal intraosseous lytic mass with a sunburst appearance. Enbloc removal and cranioplasty was performed, and histopathology was suggestive of hemangioma. Literature review was performed by searching online database.

Results

Including ours, a total of 22 cases were analysed. Mean age was 11.2 years (range 4 months-17years). Six were in the first decade and 16 were in second decade. Male: female ratio was 1.2:1. A painless palpable mass was the commonest presenting feature. Parietal and frontal bones were most commonly involved. Intracranial extension was noted in 4 cases. Mean size of the lesion was 5.1 cm (range 1-12cm). Twenty underwent primary surgical removal while two had additional pre-operative embolization. Surgical procedures were: craniectomy alone (n-3), craniectomy+cranioplasty (n-5) tumour excision+remodeling (n-2), tumour debulking/curettage (n-2). Histopathology was cavernous type in majority of cases. Mean follow-up duration was 8.4 months(range 2-38 months). There were no recurrences. One patient died due to systemic infection.

Conclusions

Ours is the first review exclusively on PCIH. Although rare, they need to be considered in the differential diagnosis of lytic skull lesions in children. Enbloc removal with cranioplasty is the preferred treatment in vault hemangiomas, while embolisation followed by debulking would suffice in large cranial base lesions.

Learning Objectives

By the end of this session, participants should be able to perceive that

1) Although rare, hemangiomas need to be kept in the differential diagnosis in pediatric skull lesions.

2) Majority are of cavernous subtypes

3) Craniectomy with 2-cm margin with cranioplasty is the standard treatment

4) Cranial base lesions require multi modality treatment and are often not curable

References

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