INFRATEMPORAL FOSSA MASS IN PEDIATRIC PATIENTS: AN UNUSUAL OCCURRENCE

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Information/ Background

The infratemporal fossa is anatomically situated in a deep location and is difficult to access. It is formed by soft tissue. Regarding the important boundaries of this area, its anterior wall is the posterior wall of maxillary sinus and posterior wall is a carotid sheath. Meanwhile, medial is lateral pterygoid plate, and roof is ramus of mandible.

With some difficulty and many complications to access the area, zygomatic arch, temporalis muscle, and ramus of mandible must be respectively removed.

Tumor of the infratemporal fossa may originate from the structures in this region, yet more often is the result of extension from neighboring structures. Nonetheless, metastatic lesions located in the region are rarely encountered.

Also, treatment of the infratemporal fossa tumor is hard to approach due to lots of surrounding vital organs in this area. Particularly, it can affect facial structure growth in children.

Hence, the best treatment outcome of this area is to save and protect structural organ involvement as much as possible with the most ultimate cure.

Case Report

A 2-year-old boy had painless left cheek mass with rapid progress for 2 months (Fig.1). The mass extended above the zygomatic arch and pushed out in the left buccal area. Clinically, only the asymmetry of cheekbone was presented.

The intraoral examination showed a rubbery firm submucosal cheek mass in front of the retromolar triangle maxillary tuberosity, with approximate size of 2*3 centimetres and no sign of inflammation.

The CT scan revealed a well defined homogeneous mass with mild enhancement at left infratemporal space extended above the zygomatic arch. Pressure effect to mandible and posterolateral wall of left maxillary sinus was noted with widening of left pterygomaxillary fissure. The 3D bony reconstruction showed the widening of infratemporal fossa due to compression of the mass at maxilla, zygomatic arch and both body, and ramus of mandible, with small bone erosion at maxilla (Fig.2).

The biopsy was done intraorally (Fig.3). The infantile fibromatosis was then diagnosed. The intervention procedure composed of left gingivobuccal sulcus incision extended to maxillary tuberosity and Gillies incision (Fig.4). The incision was done and temporalis muscle was elevated. The upper tumor at zygomatic arch was dissected. The tumor was successfully pulled down under zygomatic arch and removed transorally.

Grossly, the lesion was an irregular non-homogeneous tan grey and dark brown tissue with rubbery consistency (Fig.5). No postoperative complications were observed. Two months follow-up showed no clinical evidence of recurrence. MRI was done 3 months after surgery, with no recurrence tumor found.

Conclusion

This is the first rare case of infantile fibromatosis located in the infratemporal fossa at Siriraj Hospital. The radiologic image and pathology are, however, required for diagnosis of the infratemporal fossa lesions. Wide resection is the treatment of choice. Nevertheless, it is crucially important to preserve vital organs and cosmetics in facial area, especially in pediatric patients. Close follow-up is particularly needed to assess tumor recurrence and the function of main structures in this area.