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Case Report

Congenital epulis: A surgical and anaesthetic challenge

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ABSTRACT

Congenital Epulis or Neumann's tumour is a rare benign outgrowth commonly from the maxilla in a newborn. It presents dramatically at birth of a child with breathing or feeding problems. The treatment in such symptomatic infants is prompt excision which presents a challenge to Surgeons but more so to the anaesthesiologist. A case report is presented here with a focus on the methods of anesthesia and surgery. A brief literature review is also presented.

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1. Case Report

A one-day old female infant was rushed to the Emergency of our hospital with a bleeding tumour of the mouth, causing an obstruction to feeding the child. The child was delivered at term, at the Government hospital here, when the parents noticed the tumour in the mouth. It was not picked up in the anomaly scan conducted at 20 weeks. Trying to feed the child was impossible and on trying to move the swelling, it started bleeding briskly, greatly alarming the parents. The tumour however did not cause any difficulty in the child's breathing. There was no significant past history elicited from the parents.

On examination, a 2.5 kg child, that was alert and conscious, had a sessile growth measuring 5 x 4cm, projecting from the gingival mucosa of the left maxilla filling the oral commissure. (Figure 1) The growth was pushing up the left side of the upper lip. No other congenital anomaly was seen. As the child was already starving, she was immediately taken to the theatre and General anesthesia administered. A 24-gauge intravenous line was secured, and Isolyte P given following the Holliday-Segar formula. Before induction, it was assessed that the mass could be slightly displaced upwards leaving adequate space for laryngoscopy with a No. 1 Miller's straight blade. After preoxygenation and determining that gentle mask ventilation was possible, the patient was induced with sevoflurane 6% in oxygen.

Following an infiltration of 1ml of 1% lignocaine with adrenaline to the base of the mass, a stay suture was applied to gently pull the mass away during laryngoscopy. The neonate was intubated with a 3.5 mm uncuffed endotracheal tube at first attempt using Miller's No 1 straight blade and throat packed gently with a roller gauze.(Figure 2) IV Fentanyl 1μg/kg, IV Atracurium 0.5 mg/kg and 2% Sevoflurane was used for maintenance and at the end of resection, reversal and extubation was achieved with 0.05mg/kg Neostigmine and 0.01mg/kg Glycopyrrolate.

On gentle retraction, the attachment to the maxilla was seen, extending around 2cms and the firm tumour was

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excised in toto. The wound in the maxilla was closed. The specimen was sent for histopathological assessment and was reported as Congenital Epulis. The child had no problems in the post-operative period (Figure 3) and was discharged the next day feeding well. The wound in the maxillary gingiva healed cleanly in 10 days' time. (Figure 4)**.**

Fig. 1: New-born with a fleshy growth filling the mouth.

Fig. 2: Endotracheal intubation after a stay stitch to pull the tumour away.

2. Discussion

Congenital Epulis is known as the GGCT (Gingival Granular cell tumour) of the new born or as Neumann's tumour after Neumann who described it first.[1] Epulis literally means "off the gingiva". It has most commonly seen in female babies with a female to male ratio of 8:1.The maxillary gingiva is the commonest place of origin, though it has been found in the mandible, tongue and in some cases multifocal too.[2] It is a very rare tumour with an incidence

Fig. 3: Full recovery after surgery with normal face.

Fig. 4: Wound in maxilla well epithelialized.

of 0.0006%.[3] Up until now, just about 250 cases have been reported.[4] These tumours possibly originate from the gingival stromal mesenchyme or odontogenic epithelium.[5] Histologically, it is composed of diffuse sheets and clusters of polygonal cells containing small round to oval nuclei and abundant coarsely granular cytoplasm. There is a delicate plexiform network of capillaries.

Anaesthetic management in a case of congenital epulis with difficulty in breathing and feeding is associated with the double challenge of managing a neonate with a propensity for respiratory and cardiovascular critical events along with age-related altered pharmacokinetics of anaesthetic drugs, maintaining fluid and electrolyte balance and a predisposition to hypoxia, predilection for airway obstruction and difficult intubation.[6] There is an additional risk of bleeding from the tumor which makes airway control preferable though not mandatory as both a laryngeal mask airway and mask ventilation[7] have been used successfully.

Treatment consists of prompt excision. Problems in future dentition or recurrence or malignant transformation has not been reported.

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4. Conflict of Interest

The author declares that there is no conflict of interest.

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