Severe Intraoperative Hemorrhage during Craniectomy in a Patient with Polyostotic Fibrous Dysplasia

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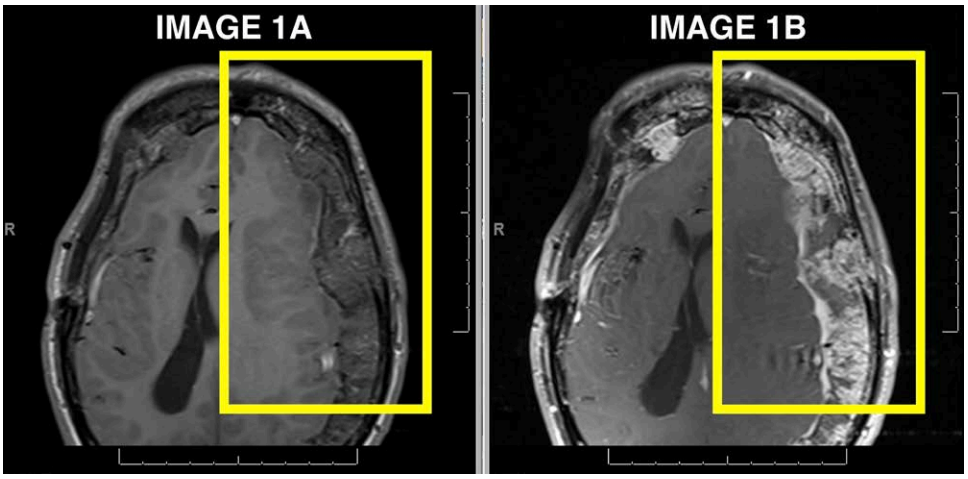

Polyostotic fibrous dysplasia is a rare disorder of bone development characterized by focal replacement of normal bone matrix with disorganized fibroosseous tissue. This leads to bone deformity, hypervascularity, impingement on surrounding structures, and fracture. *Image 1A* represents the preoperative magnetic resonance image of a 25-yr-old male with polyostotic fibrous dysplasia who underwent decompressive hemicraniectomy. The resected portion of skull (*yellow box*) is notable for atypical thickness and irregularity of the dysplastic bone. *Image 1B* shows this same area after magnetic resonance image contrast administration. The significant contrast uptake (*white enhancement*) demonstrates the highly vascular nature of the bone. This patient's intraoperative course was complicated by severe, refractory hemorrhage. *Image 2* represents the gross specimen of resected skull, again notable for its thickness and highly vascularized surface.

Patients with polyostotic fibrous dysplasia present two main challenges to the anesthesiologist: difficult airway anatomy and an underappreciated risk of intraoperative hemorrhage. These patients frequently present with disfigured facies secondary to dysplasia of the facial bones, therefore imaging, history, and airway exam may aid in planning for airway management. Several reports describe successful management with laryngeal mask airway, but video laryngoscopy, fiberoptic awake intubation, and elective tracheostomy should all be considered.[1] Preoperatively, patients should be typed and cross-matched, because they are susceptible to antibody production secondary to frequent transfusion.[2] Large-bore IV access is essential, and blood product, a rapid infuser, and cell salvage should be immediately available.[3] A team discussion regarding surgical hemostasis strategies is indicated before incision. Intraoperatively, labs should be checked frequently, and transfusion should be guided by thromboelastography (rotational thromboelastometry) and arterial blood gas.

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Competing Interests

The authors declare no competing interests.

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