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Image Article

Subdural Empyema Due to Poor Dentition

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A 37-year-old man presenting with fever, headache, and loss of appetite for several weeks was found to have poor dentition (Figure 1A); he had not brushed his teeth since his teenage years. A coronal-head Computed Tomography (CT) scan revealed an interrupted right maxillary sinus floor corresponding to the alveolar process (Figure 1B). Brain Magnetic Resonance Imaging (MRI) revealed a massive subdural empyema affecting the right cerebral hemispheres and dura with high, intense peripheral gadolinium enhancement, edema, and midline shift (Figures 1C and 1D). We diagnosed the patient with a subdural empyema caused by poor dentition. Despite broad-spectrum antibiotic administration, the patient became drowsy and developed left hemiparesis. We promptly performed surgical evacuation with decompressive craniotomy, pus drainage (Figures 1E and 1F), and tooth extraction. The patient's physical condition improved thereafter.

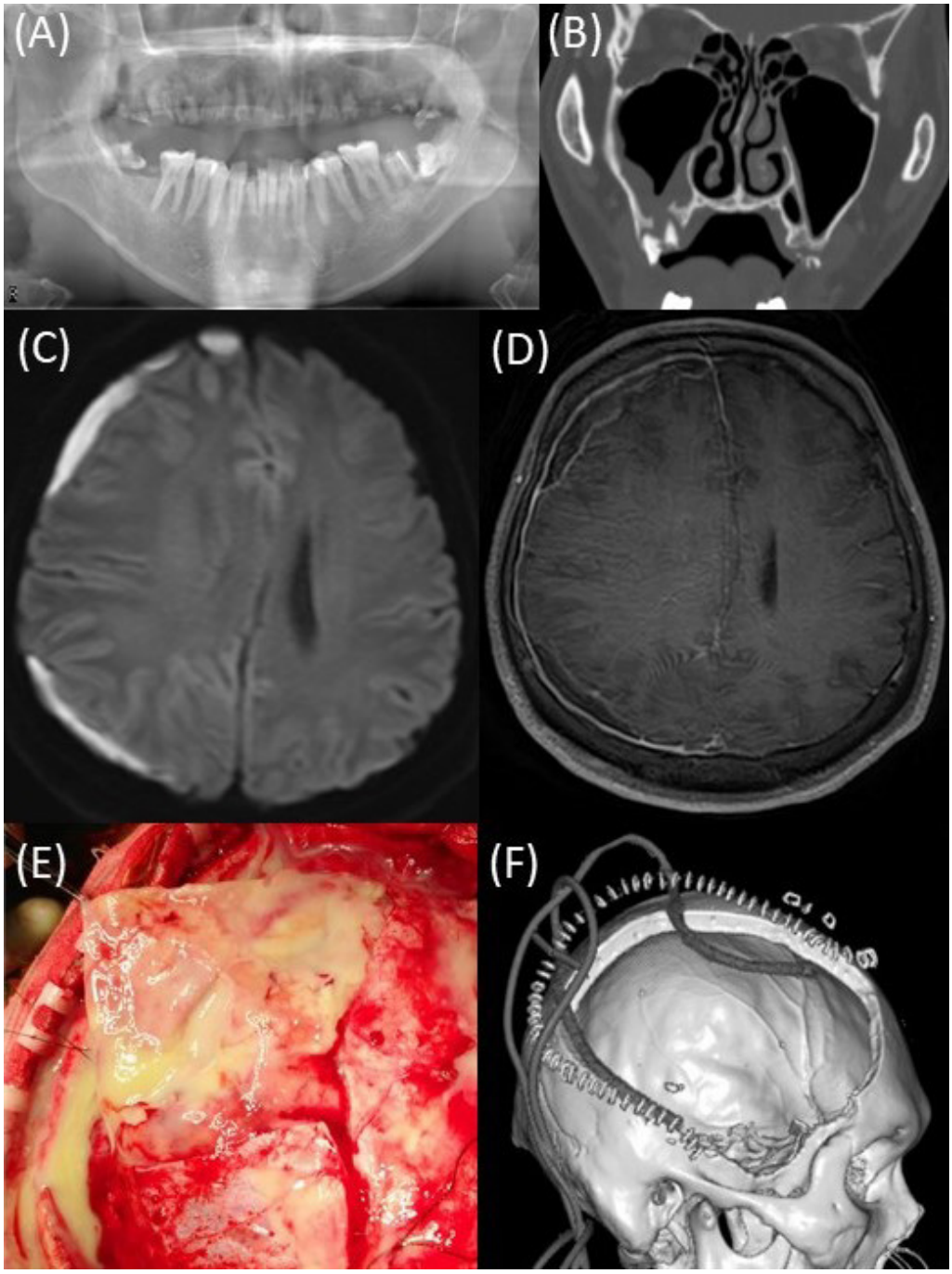

Figure 1: A. Poor dentition was identified using dental X-rays. B. Bone window coronal-head Computed Tomography (CT) scan reveals an interruption of the right maxillary sinus floor corresponding to the alveolar process. C. Diffusion-weighted Magnetic Resonance Imaging (MRI) reveals a massive subdural empyema affecting the right cerebral hemispheres and a midline shift. D. T1-weighted-with-gadolinium MRI reveals the right cerebral hemispheres and dura with high, intense peripheral gadolinium enhancement. E. Intraoperative imaging shows the flow of pus from the subdural space. F. Postoperative three-dimensional CT shows the decompressive craniotomy and drainage tube.

Subdural empyema's can result from various causes, including sinusitis, meningitis, otitis media, operative infection, and previous head trauma. Poor dentition accounts for only 0.7% of all cases [1]. Treatment requires a prolonged antibiotics course and immediate surgical evacuation with either a burr hole or craniotomy. One study reported a higher success rate for craniotomy when compared with burr hole drainage, which has a higher recurrence rate [2].

Informed Consent

Written informed consent was obtained from the patient.

References

1. Nathoo N, Nadvi SS, van Dellen JR, Gouws E (1999) Intracranial subdural empyemas in the era of computed tomography: a review of 699 cases. Neurosurgery 44: 529-535.

2. Yilmaz N, Kiymaz N, Yilmaz C, Bay A, Yuca SA, et al. (2006) Surgical treatment outcome of subdural empyema: a clinical study. Pediatr Neurosurg 42: 293-298.