A Rare Incidence of Polymicrobial Frontal Sinus Osteomyelitis In an Adult

Jersey Shore University Medical Center

Kyle Wiseman, DO; Dhairya Gor, MD; Zaka Ahmed, MD; Sobaan Taj, MD; Edward Liu, MD; Shuvendu Sen, MD

He was started on ampicillin-sulbactam and sent to the operating room where he underwent multiple procedures including excision of a frontal sinus/cutaneous fistula, fronto-ethmoid debridement and cannulation with lavage/debridement. Post-operative wound cultures revealed the presence of Methicillin Sensitive Staphylococcus Aureus (MSSA), Streptococcus constellatus, Prevotella intermedia Fusobacterium nucleatum, Candida dubliniensis, Parvimonas micra and a heterogeneous group of coagulase-negative staphylococci. The patient continued to have purulent drainage from his forehead wound and fluconazole was added. Given a lack of improvement on medical management, ENT performed a second surgery, including bilateral sphenoidotomy, bilateral frontal sinusotomy, frontoethmoid debridement, cannulation, lavage, bilateral and total ethmoidectomy sinuses. A penrose drain was temporarily placed. Osteomyelitis of the calvarium was noted and the patient was diagnosed with Pott’s Puffy Tumor with forehead abscess. After discussion with ENT, the decision was made by infectious disease to treat the condition as osteomyelitis of the skull with Tigeclycline twice-daily infusion for six weeks along with oral Fluconazole for two weeks.

Discussion

Pott’s Puffy tumor was initially thought to be caused by head trauma, however, frontal sinusitis has now been deemed the more likely cause. The condition is characterized by limited and painful swelling on the forehead with fever, headache, nasal discharge, or high intracranial pressure. Though it is more commonly seen in young people, Pott’s Puffy Tumor can rarely occur in adults. The cultures are usually polymicrobial with anaerobes often seen. Some of the common bacteria isolated include alpha-hemolytic streptococcus, peptostreptococcus, Bacteroides and Fusobacterium. To have the fullest chance of recovery and prevent life-threatening intracranial complications, it is imperative to detect and treat this condition as early as possible.

References