Introduction

Retropharyngeal abscesses are common in the pediatric population. Deep space neck infections in pediatric patients often are the result of acute tonsillitis complicated by extension into the peritonsillar space, but management of such cases is not standardized and treatment is usually institutionally-dependent. A retrospective review by Al-Sabah and colleagues supports a conservative approach to treatment when not manifest as Lemierre’s syndrome.

Case Report

A 17-year-old previously healthy male presented to the emergency room with one week of progressive right neck swelling and pain. The patient reported being hit with a basketball on the right side of his neck a week prior to his presentation. On physical examination, there was an area of erythema and induration, without limitation of cervical range of motion. The patient was afibrile and had an initial white blood cell count of 17.8 with a left shift. A CT of the neck with intravenous contrast performed at this time demonstrated a 2.8cm right-sided neck mass at the level of C5 deep to the sternocleidomastoid muscle with minimal rim-enhancement (Figure 1). The patient was discharged the same day to the care of his pediatrician with instructions for follow-up.

Over the next 48 hours the patient received intravenous ampicillin-sulbactam and was observed; however, there was minimal clinical improvement. At this time, after a discussion with the patient and his family, the decision was made to proceed with exploration and drainage of the right neck. The patient underwent a right retropharyngeal neck exploration, with minimal intraoperative findings. An initial white blood cell count of 26.9 was obtained post-operatively, with a left shift of the differential. A drain was placed.

Over the next few days, the patient reported subjective improvement in his symptoms, and clinically, he remained afibrile and demonstrated gradually decreasing drain output and white blood cell count. Initial cultures failed to speciate any significant organisms, and empiric antibiotic coverage was continued. On post-operative day three the penrose drain was removed, and the patient was discharged on amoxicillin-clavulanate for another ten days with outpatient follow-up.

Operative wound cultures eventually grew Fusobacterium necrophorum. A further consultation with our institutional infectious disease colleagues agreed with our outpatient oral antibiotic recommendation, and as of the most recent clinical encounter the patient did not have any evidence of significant clinical relapse.

Conclusions

Fusobacterium necrophorum is an uncommon pathogen causing pediatric deep neck space infections, even more so when not manifest as Lemierre’s syndrome. It is associated with a favorable prognosis when identified early, and management with directed antibiotic therapy and surgical drainage when indicated is appropriate. In addition, macroscles should be avoided as initial empiric coverage in cases of pediatric neck infections, as Fusobacterium necrophorum may be involved and is often resistant.

References

9. Figure 1: Axial and sagittal CT of the neck with intravenous contrast demonstrating right cervical phlegmon deep to the sternocleidomastoid muscle.