

ED/Inpatient Deep Neck Infections Care Guideline

Inclusion Criteria: presence of fever, decreased neck movement, dysphagia, inability to tolerate secretions, change in voice, stertor, stridor

Exclusion Criteria: immune compromised status, trauma, recent neck surgery, hemodynamic instability, impending respiratory failure, neonatal (<3 months)

Assess airway status

Tripoding
Significant drooling
Toxic appearance
Orthopnea

Yes

No

- Keep child comfortable
- Consult ENT/Anesthesia for airway assistance
- Secure airway
- Ampicillin/sulbactam 37.5 mg/kg IV q6h, infants, 50 mg/kg IV q6h children, 1,000 mg IV q6h > 20 kg
or
- Linezolid 10 mg/kg IV q 8h <12 yrs or 600 mg IV or po q12h > 12 years
- Arrange for PICU admit
- ID Consult

Off Guideline

If work-up negative
Consider discharge with strict return precautions +/- po abx

Proceed with work-up

- Obtain:
- CBC with diff
 - ESR
 - CRP
 - Blood Culture
 - Imaging

Imaging as indicated

US Neck (if superficial foci/swelling)
or
CT Neck with IV contrast (if deeper foci suspected)
or
MRA Neck with IV contrast if clinical evidence of vessel thrombosis/aneurysm

If Work-Up Positive -> Admit

- Antibiotics:
- Ampicillin/sulbactam 37.5 mg/kg IV q6h, infants, 50 mg/kg IV q6h children, 1000 mg IV q6h > 20 kg
or
 - Ceftriaxone 75 mg/kg IV q24h, 2,000 mg IV q24h >25 kg **and** clindamycin 10 mg/kg IV q6hr <60 kg; 600 mg IV q6h > 60 kg for (if history of MRSA, risk factors for MRSA, or penicillin allergy)

Drainable Abscess

< 2 years
or
> 2cm

Yes

No

- Consult ENT
- Consider ID consult
- Keep NPO
- IV Fluids
- Continue IV antibiotics
- Evaluate need for surgical drainage

- Continue IV antibiotics
- Reassess for clinical improvement
- ENT consult if no improvement in 48 hours, or worsening

Recommendations/Considerations

Deep Neck Infections

Retropharyngeal Abscess

- Ages: 2-4 years
- Risk factors: recent URI, OP trauma

Peritonsillar Abscess

- Peaks in adolescence (average 13.6 yr)

Parapharyngeal Space Infections (Lateral pharyngeal space infection)

- most often arises via contiguous spread of infection from a peritonsillar or retropharyngeal abscess

Common Pathogens: Group A Streptococcus, Staph aureus (including MRSA), Haemophilus species, Bacteroides, Prevotella, Fusobacterium, Veillonella Peptostreptococcus and Propionibacterium. Infections are usually polymicrobial.

Complications: airway obstruction, aspiration pneumonia, carotid artery pseudoaneurysm or rupture resulting in sepsis or hemorrhage, Internal jugular vein thrombosis, septic thrombophlebitis of internal jugular vein (Lemierre Syndrome), mediastinitis

Education

Cerner Discharge Education - Peritonsillar Abscess

Discharge Criteria

- Afebrile
- Free range of motion
- Resolution of neck swelling
- No respiratory difficulty
- Tolerating diet
- Antibiotic course prescribed

References

Deep Neck Abscess

Adil E, Tarnshish Y, et al. The public health impact of pediatric deep neck space infections. *Otolaryngology-Head and Neck Surgery*, 2015; 153(6). DOI: 10.1177/0194599815606412

Lawrence R, Bateman N. Controversies in the management of deep neck space infection in children: an evidence-based review. *Clinical Otolaryngology*, 2017; 42m 156-1636.

Balfour-Lynn IM, Wright M. Acute infections that produce upper airway obstruction. *Kendig's Disorders of the Respiratory Tract in Children*. Elsevier Masson ISBN 978-0-323-4487-01.