

Group A Strep Pharyngitis 2023

Clinical Update from Infectious Disease, ENT, and Community Practice Advisory Council

Cases of GAS pharyngitis have increased in our area, including recurrences, beginning in the fall of 2022. This clinical update reviews our current understanding of testing and treatment of both primary and recurrent GAS infections. It is based on a review of current recommendations from the AAP Red Book, CDC, UpToDate, American Academy of Otolaryngology, CCHMC faculty guidance, and recent data from MMWR.

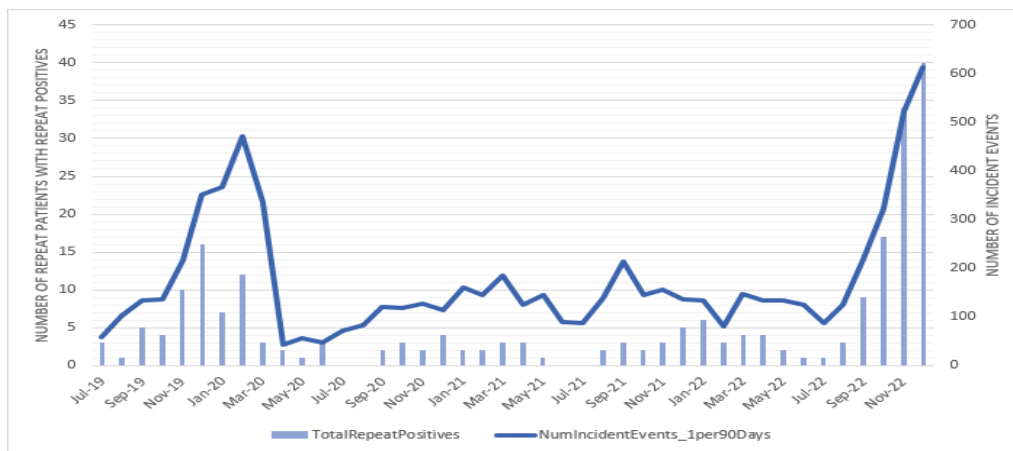
CLINICAL PRESENTATION

The most common group A infection is acute pharyngitis which manifests as sore throat with tonsillar inflammation, often tender anterior cervical lymphadenopathy, palatal petechiae, or strawberry tongue. Scarlet fever may also occur and involves a characteristic erythematous sandpaper like rash.

Acute streptococcal pharyngitis has historically been relatively uncommon in children under 3 years, however it can occur, especially with direct household/childcare exposures. Children in this age group may also present with rhinitis and protracted illness with moderate fever, irritability, and anorexia (streptococcal fever or streptococci).¹

CASES

The graph below shows CCHMC lab data over time through December 2022. Incident (new) events are defined as any positive result >90 days from any prior GAS pos events. An event was considered a “repeat” if positive 14-90 days after a previous event. Events <14 days were not included in repeats because they seemed to be unlikely to be due to a new infection.³



CCHMC Lab data not for publication

RECURRENCE

Recurrences are mainly felt to be due to high community levels and re-infection, but other factors could be contributing. Data from this season from CO and MN do not suggest there is resistance to penicillin/amoxicillin.²

TESTING

Testing is recommended when there are consistent symptoms and exam findings. Avoid testing in first couple days of an illness with other viral symptoms (cough, rhinorrhea, pharyngeal blisters) and no exposures or physical exam findings to support a secondary infection with strep. ¹

On clinical examination, patients with group A strep pharyngitis usually have

- Pharyngeal and tonsillar erythema
- Tonsillar hypertrophy with or without exudates
- Palatal petechiae
- Anterior cervical lymphadenopathy

TREATMENT ^{1,5}

The goal of treatment of GAS is to reduce acute morbidity, suppurative and nonsuppurative complications, and transmission to close contacts.

First line treatment remains PCN or Amoxil.

Amoxil 50 mg/kg/div BID or QD max 1000 mg/day.

PCN VK: 250 mg 2 to 3 times per day for 10 days for children less than 27 kg; 500 mg 2-3 times per day for children over 27 kg.

Amoxicillin or PCN VK can be used with recurrences in same season. For patients who were non-adherent with first treatment, consider IM PCN G.

If a patient does not respond to PCN/amoxicillin, consider looking for additional/alternative diagnoses (viral illness such as EBV, enterovirus) or complications such as peritonsillar abscess.

If quick or multiple recurrences, and exam consistent with a recurrence with classic features, can also consider a more B-lactam stable antibiotic (Amox/clauv or 1st gen Cephalosporin). ⁵

If 1st gen Cephalosporin already used, and continued recurrences, can consider higher generation (third/fourth generation such as cefdinir 14 mg/kg/day divided BID) instead of azithromycin or clindamycin (due to potential resistance). ⁵

For mild PCN allergy can use 1st generation cephalosporin. ⁵

If significant PCN allergy, consider azithromycin. Clindamycin is an alternative. Local resistance to these antibiotics is not known currently so monitor for lack of response. ⁵

PREVENTION

Antibiotic prophylaxis for household contacts is typically not required. Prevention is primarily through hand hygiene and avoiding contact with contaminated secretions. Affected patients should avoid sharing food, drinks, toothbrushes, etc. with others. ¹

RETURN TO SCHOOL/ACTIVITIES

Return to school/childcare can occur when well appearing and at least 12 hours after initiation of antibiotics. ¹

COMPLICATIONS OF GAS

Complications are rare in children who are on adequate therapy but include invasive infections such as peritonsillar abscess or suppurative cervical lymphadenitis. Of note, the CDC has reported an increase in overall invasive Group A Streptococcal infections such as sepsis and necrotizing fasciitis this season; there is currently not a clear link between preceding GAS pharyngitis and invasive infection beyond what is listed above. Nonsuppurative complications include acute rheumatic fever and acute glomerulonephritis which are rare in the United States where prompt treatment is widely available. ⁶

CARRIERS

Throat culture surveys of healthy asymptomatic children during the strep season yield GAS infection prevalence rates as high as 25%. Antimicrobial therapy is not indicated for most GAS pharyngeal carriers. It is difficult to eradicate with conventional antibiotic therapy. Indications for eradication include: 1. A local outbreak of ARF or PSGN; 2. An outbreak of GAS pharyngitis in a closed community; 3. A family history of ARF; 4. Multiple episodes of documented symptomatic GAS pharyngitis in a family over many weeks despite therapy; 5. When a patient is being considered for tonsillectomy solely on recurrent GAS. Oral clindamycin 20-30 mg/kg per day in 3 doses (max 900 mg per day) for 10 days has been reported most effective. ¹

TONSILLECTOMY

Tonsillectomy is rarely indicated for recurrent GAS. Per the American Academy of Otolaryngology-Head and Neck Surgery guidelines, “watchful waiting” is recommended instead of tonsillectomy unless a child has had more than 7 episodes of GAS in one year, more than 5 episodes a year in the past 2 years; or more than 3 episodes a year in the past 3 years (). There are some modifying factors that may make tonsillectomy a reasonable option in children who do not meet the above criteria (e.g., multiple antibiotic allergies, more than one episode of peritonsillar abscess, PFAPA). ⁴

REFERENCES

1. American Academy of Pediatrics. Group A Streptococcal Infections. 694-707. In: Kimberlin DW, Barnett ED, Lynfield R, Sawyer MD, eds. Red Book: 2021 Report of the Committee on Infectious Diseases. Itasca, IL: American Academy of Pediatrics: 2021 (694-707).
2. Barnes M, Youngkin E, Zipprich J, et al. Notes from the Field: Increase in Pediatric Invasive Group A Streptococcal Infections – Colorado and Minnesota, October-December 2022. MMWR Morb Mortal Wkly Rep 2023; 72:265-267.
3. CCHMC Proprietary Lab Data not published or for distribution.
4. Mitchell RB, Archer SM, Ishman SL, et al. Clinical Practice Guideline: Tonsillectomy in Children (Update). Otolaryngology – Head and Neck Surgery. 2019; 160 (1_suppl): S1-S42.
5. UpToDate, 2023, Treatment and prevention of streptococcal pharyngitis in adults and children.
6. CDC (<https://www.cdc.gov/groupastrep/igas-infections-investigation.html>)