

A CASE OF SCARLET FEVER IN A 4-YEAR-OLD FEMALE: CLINICAL PRESENTATION AND MANAGEMENT

ABHIJITH AD¹, ANIL KUMAR KM², ANJALI SRUTHY S^{3*}, JAHANA SHERIN¹

¹Department of Pharmacy, KTN College of Pharmacy, Palakkad, Kerala, India. ²Department of Paediatric Intensive Care, Valluvanad Hospital, Palakkad, Kerala, India. ³Department of Pharmacy Practice, KTN College of Pharmacy, Palakkad, Kerala, India.
Email: anjalisruthy7@gmail.com

Received: 9 July 2025, Revised and Accepted: 20 August 2025

ABSTRACT

Scarlet fever is an acute infectious disease caused by Group A *Streptococcus*, characterized by fever, pharyngitis, and a distinctive rash. This case study presents a 4-year-old female diagnosed with scarlet fever, detailing the clinical features, laboratory findings, and treatment approach. The case highlights the importance of early recognition and appropriate antibiotic therapy to prevent complications.

Keywords: Scarlet fever, *Streptococcus pyogenes*, Pediatric infection, Megapen, Case report

© 2025 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ijms.2025v13i5.55483>. Journal homepage: <https://innovareacademics.in/journals/index.php/ijms>

INTRODUCTION

Scarlet fever, also known as scarlatina, is a clinical syndrome resulting from pharyngeal infection with Group A *Streptococcus* that produces erythrogenic toxins. It primarily affects children aged 4–8 years and is transmitted through respiratory droplets. Clinical features include sore throat, fever, a characteristic sandpaper-like rash, and a “strawberry” tongue. Early diagnosis and treatment are crucial to avoid serious complications, such as rheumatic fever and glomerulonephritis.

CASE PRESENTATION

A 4-year-old female, Baby Krishvi, presented to the clinic with a 3-day history of high-grade fever and rhinitis. The fever was partially controlled with antipyretics. The child also had decreased oral intake, generalized tiredness, and occasional cough.

On examination

- General condition: Alert, febrile (101.2°F)
- Heart rate: 138 bpm
- Oxygen saturation: 98%
- Throat: Congested with erythema
- Tongue: Red with a strawberry-like appearance.

Laboratory investigations

- C-reactive protein (CRP): 97 mg/L, indicating significant inflammation.

Diagnosis

- Scarlet fever due to Group A streptococcal infection.

Treatment and management

The patient was initiated on antibiotic therapy with Megapen (ampicillin + cloxacillin) at a dosage of 500 mg/125 mg every 8–12 h for 10 days. Supportive care included:

- Paracetamol for fever
- Ibuprofen for pain and inflammation
- Nebulization with Asthalin for respiratory symptoms
- Adequate hydration.

Outcome

The child responded well to treatment. Fever resolved, oral intake improved, and she was discharged once she was afebrile and tolerating oral feeds.

DISCUSSION

Scarlet fever is a toxin-mediated illness that follows streptococcal pharyngitis. Diagnosis is typically clinical, supported by rapid antigen detection tests and throat cultures. Elevated CRP levels indicate inflammation and support the diagnosis. Penicillin or amoxicillin remains the first-line treatment, and alternatives, such as cephalosporins or macrolides, are used in penicillin-allergic patients. In this case, the choice of Mega pen provided effective coverage. Early treatment helped prevent complications and ensured a quick recovery [1-5].

CONCLUSION

This case underscores the classic clinical features of scarlet fever and the effectiveness of early antibiotic therapy. Prompt diagnosis and treatment are key in managing pediatric patients with Group A Streptococcal infection.

AUTHORS' CONTRIBUTIONS

- Abhijith. A.D contributed to case data collection and manuscript drafting. Jahana Sherin assisted with literature review and formatting.
- Dr. Anilkumar K M and Anjali Sruthy S supervised the case management and reviewed the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

AUTHOR FUNDING

No funding was received for this study.

PATIENT CONSENT

Written informed consent was obtained from the patient's guardian for publication of this case report.

REFERENCES

1. Available from: https://www.micromedexsolutions.com/micromedex2/librarian/cs/de0e9c/nd_pr/evidencexpert/nd_p/evidencexpert/duplicationshieldsync/228cf9/nd_pg/evidencexpert/nd_b/evidencexpert/nd_appproduct/evidencexpert/nd_t/evidencexpert/pfactionid/evidencexpert.intermediatetodocumentlink?docid=cp1859a&contentsetid=

- 135&title=staphylococcal+scalded+skin+syndrome&servicestitle=staphylococcal+scalded+skin+syndrome# [Last accessed on 25 Aug 2025].
2. MedlinePlus. Streptococcal Infections. Available from: <https://medlineplus.gov/streptococcalinfections.html> [Last accessed on 25 Aug 2025].
 3. NHS. Scarlet Fever. Available from: <https://www.nhs.uk/conditions/scarlet-fever> [Last accessed on 25 Aug 2025].
 4. MedlinePlus. Strep A Test. Available from: <https://medlineplus.gov/lab-tests/strep-a-test> [Last accessed on 25 Aug 2025].
 5. Cleveland Clinic. Group A Streptococcal Infections. Available from: <https://my.clevelandclinic.org/health/diseases/5911-group-a-streptococcal-infections> [Last accessed on 25 Aug 2025].