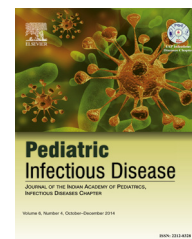


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Case Report

Community acquired MRSA infections—Three recent cases and an overview of CA MRSA infections



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ABSTRACT

Skin and soft tissue infections caused by *Staphylococcus aureus* are commonly encountered in pediatric practice. *Staph* infections acquired in the hospital setting are generally methicillin resistant. However these days, infections which are clearly “community acquired” are increasingly found to be due to methicillin resistant *Staphylococcus*—so called CA MRSA. Community-associated MRSA (CA-MRSA) refers to a MRSA infection with onset in the community in an individual lacking established MRSA risk factors, such as recent hospitalization, surgery, residence in a long-term care facility, receipt of dialysis, or presence of invasive medical devices. Literature from western countries suggests a significant prevalence of CA MRSA and the same scenario seems to be developing in our country. We had three recent cases of such CA MRSA infections, with no prior contact with hospital, all “community acquired” which was also reflected in their antibiotic sensitivity pattern.

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1. Case 1

A 28 day old male neonate was brought for complaints of high fever and noisy breathing for one day. The baby had been shown to another pediatrician the previous night for fever and was suspected to have elevated body temperature due to environmental factors. He developed high spiking fever at night, and was then rushed to our hospital. There was no history of excessive crying, cough, stridor, vomiting, seizures, loose stools or refusal of feeds. This baby was a term delivery by caesarean section and had cried immediately. Birth weight

was 3.25 kg. Post natal period was uneventful and he had been discharged on the fifth day of life.

On examination the child was febrile, with heart rate of 142/min, respiratory rate of 40/min. SpO₂ in room air was 94%. Capillary refill time was 2 s, random glucose was 204 mg/dl. The anterior fontanelle was normal, and the baby's cry and activity was fair. Neonatal reflexes were normal. The baby was accepting feeds and was hemodynamically stable. There was no obvious focus of infection. After admission, blood investigations and a CSF examination were performed. Intravenous ceftriaxone was started while awaiting the reports. CBC showed hemoglobin of 15.1 g/dl, total leukocyte count of

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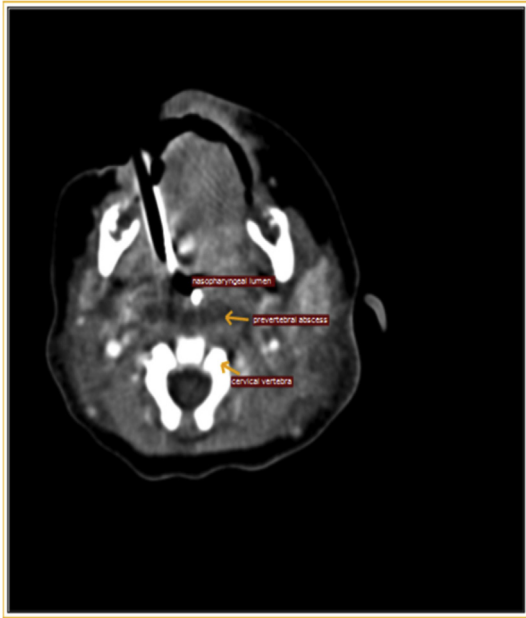


Fig. 1 – Axial CT section showing retropharyngeal abscess.

16,400/cumm with polymorphs 69%, lymphocytes 23% and platelets-2,06,000/cumm. CRP was 20 mg/l. CSF was normal except for CSF sugar of 93 mg/dl for a simultaneous blood sugar value of 394 mg/dl.

Three hours later, after a feed, the baby had a sudden episode of apnea, became limp and desaturated. This was thought to be probably due to aspiration of feeds. He was rushed to the PICU, was intubated and ventilated. Post intubation the child maintained saturation and had no further apneic episodes. Procalcitonin levels were high (7.110 mcg/L). Injectable antibiotics were continued. On day 3 of admission a



Fig. 2 – Sagittal CT section showing inferior extension of retropharyngeal abscess.

swelling was noted in left side of neck. A CT Scan of the neck (Figs. 1 and 2) revealed an abscess in the visceral space anterior to thyroid gland extending laterally into bilateral parapharyngeal spaces, left submandibular space and posteriorly into retropharyngeal space and inferiorly upto superior mediastinum in prevascular space.

The abscess was drained surgically under general anesthesia. Intravenous vancomycin was started. Pus culture from the abscess showed growth of MRSA sensitive to vancomycin, teicoplanin, linezolid, tetracycline and cotrimoxazole and resistant to oxacillin, cefoxitin, ciprofloxacin and amoxy-clav with intermediate resistance to erythromycin and clindamycin. Blood culture was sterile. As the child improved, hyperglycemia settled, he was extubated and weaned to room air. Packed red blood cells transfusion was given for anemia. Intravenous vancomycin was given for ten days and oral linezolid was advised for a further 10 day period. The child recovered uneventfully.

2. Case 2

A four month old baby girl brought for swelling in left submandibular region since three days, with fever 100–102 °F since last 2 days. There were no other complaints such as feeding difficulty, drooling of saliva or difficulty in breathing. There was no history of hospitalization or any medical treatment (other than routine immunizations). On examination, the baby was febrile, vitals were normal. There was a tender, warm submandibular swelling. There were no systemic complaints. The baby had been started on co-amoxiclav syrup for the last two days. Clinically this was a submandibular pyogenic abscess. The abscess was incised and drained under general anesthesia. MRSA was isolated from the pus culture which was oxacillin, cefoxitin, erythromycin, co-amoxiclav, ciprofloxacin and co-trimoxazole resistant but sensitive to tetracycline, clindamycin, vancomycin, teicoplanin and linezolid. The baby was put on oral linezolid for two weeks and recovered uneventfully. The parents were also tested for MRSA and the mother's nasal swab culture also grew MRSA.

3. Case 3

A 18 month old boy was brought with complaints of intermittent fever, cough since 10 days and poor oral intake since 4 days. There was no history of breathlessness or with history of TB contact or of repeated lower respiratory tract infections. He had received oral co amoxiclav for 4 days with poor response to the same on outpatient basis. There was no H/o recent hospitalization.

Birth history was uneventful with no post natal complications. He was immunized till date as per EPI schedule and had not received Pneumococcal or HiB vaccines. On examination, he was febrile with temperature of 38 °C, conscious, irritable with HR of 136/min, respiratory rate of 36/min, saturation of 96% on room air and had some pallor. Breath sounds were decreased on left side inframammary and infra axillary areas and there were no added sounds. Rest of the systemic

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