

What The EYE Does Not SEE

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Paediatric Infectious Disease Unit -
UKZN

- Patient LM is a 5 year old male who was referred from a local clinic to the local hospital on the 1st of July 2011:
- Main complaints:
 - Left eye swelling x 3 days
 - Associated with fever and loss of appetite
- Not prior history of trauma to the eye
- No Prior hospitalizations
- Not associated with vomiting, headache, blurred vision
- HIV Negative

- On Examination:
- Pyrexia (Temp 40.4C), P = 130
- Clinical examination revealed:
 - swelling of Left eyelid
 - discharge, no proptosis
 - Fundoscopy examination was normal
 - Full range of eye movements
- CT Scan: Lt Orbital Cellulitis/Lt Superior ophthalmic vein thrombosis
- FBC: High WBCC / Low Hb / Plt 61

- Admission
- Lt Orbital Cellulitis
- Lt Superior Orbital Vein Thrombosis

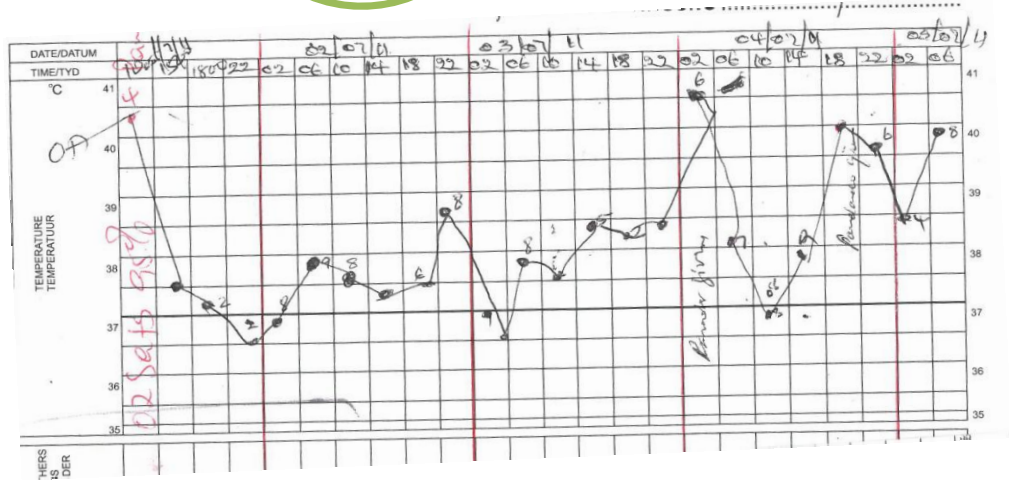
1 July

4 July

7 July

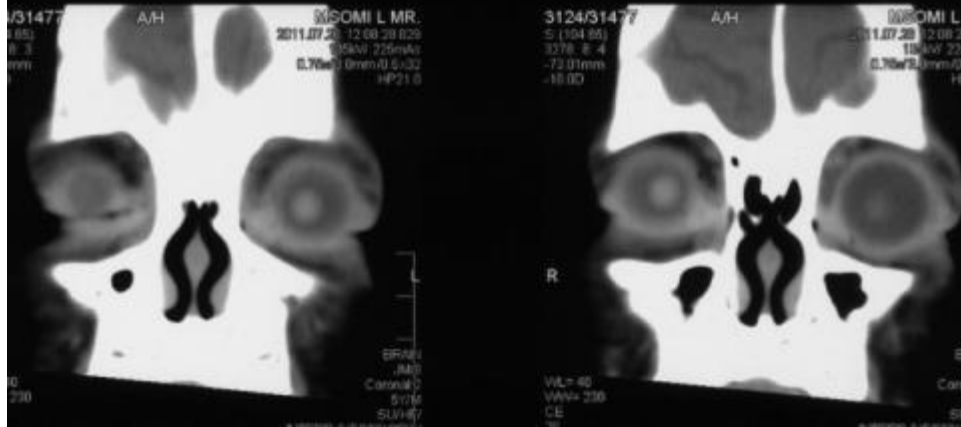
29 July

3 August



- Common causes of an Orbital Cellulitis in this age group:
 - Streptococcus spp
 - Staphylococcus Aureus
 - Haemophilus Influenza type B

- Pathogenesis of Orbital Cellulitis:
 - Extension of an infection from the periorbital structures esp paranasal sinuses
 - Direct inoculation of the orbit
 - Haematogenous spread from bacteremia



•Admission
 •Lt Orbital Cellulitis
 •Lt Superior Orbital Vein Thrombosis

1 July

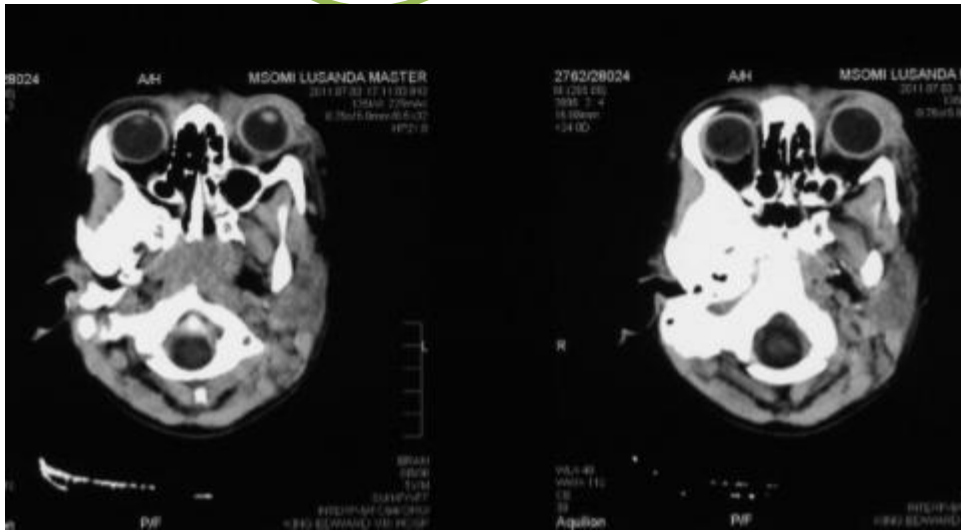
•Blood / Pus Swab –
 MRSA S Vancomycin
 •Vancomycin/Amikacin
 added

4 July

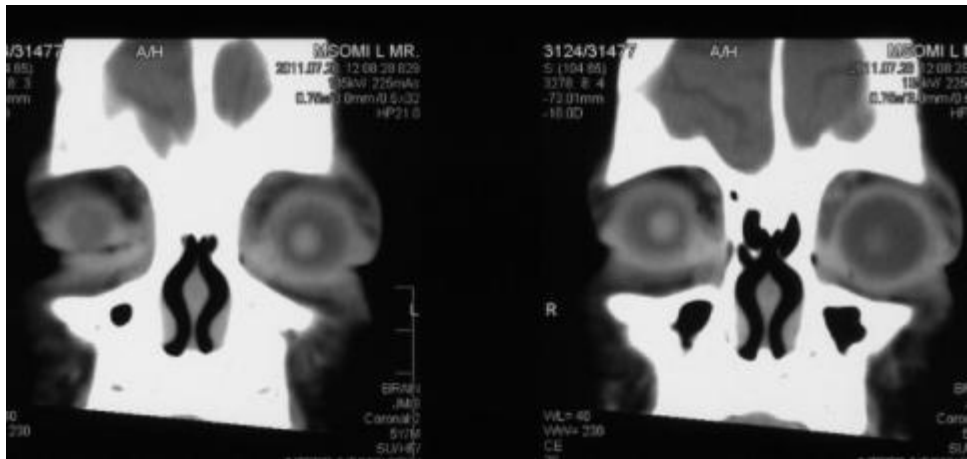
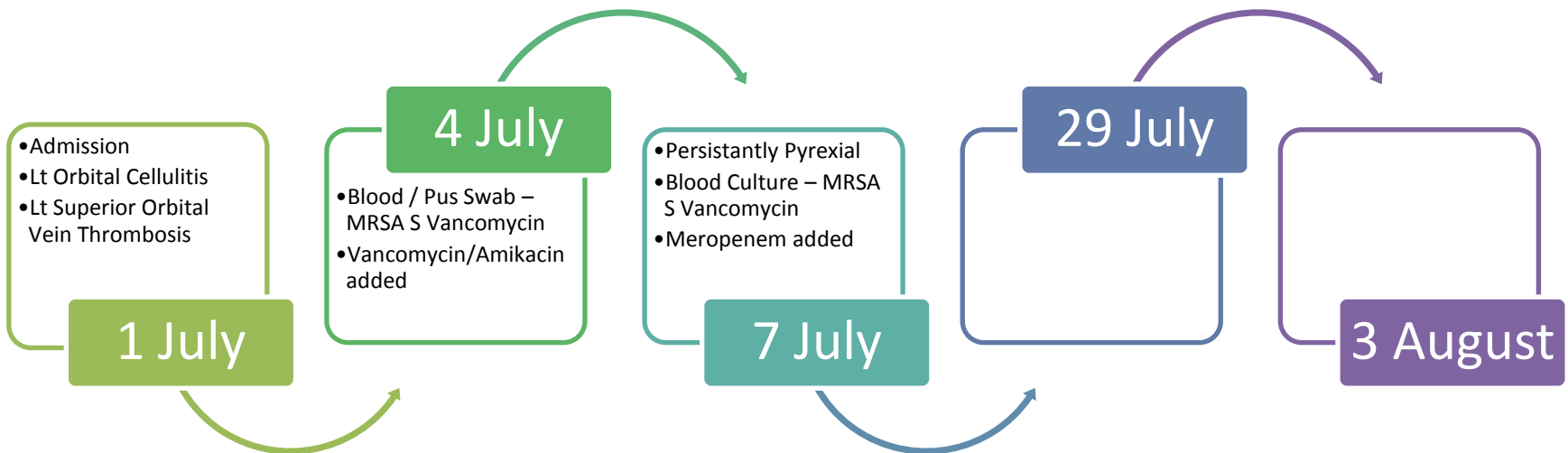
7 July

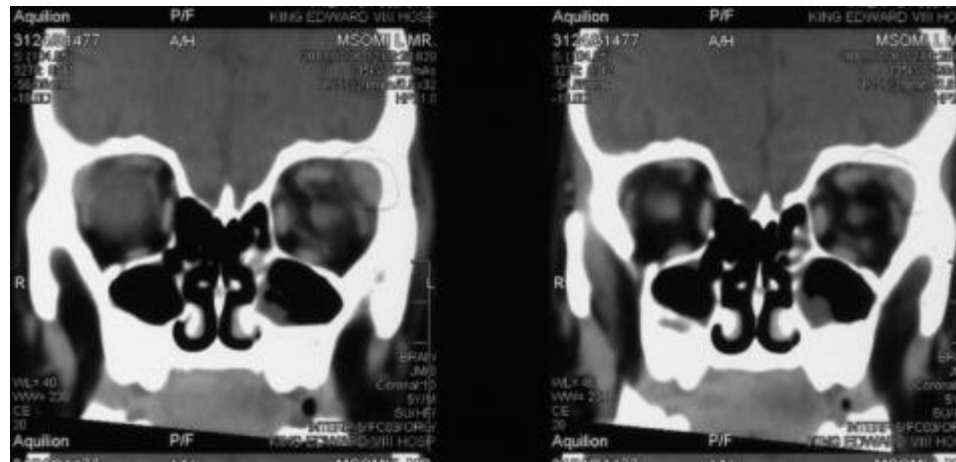
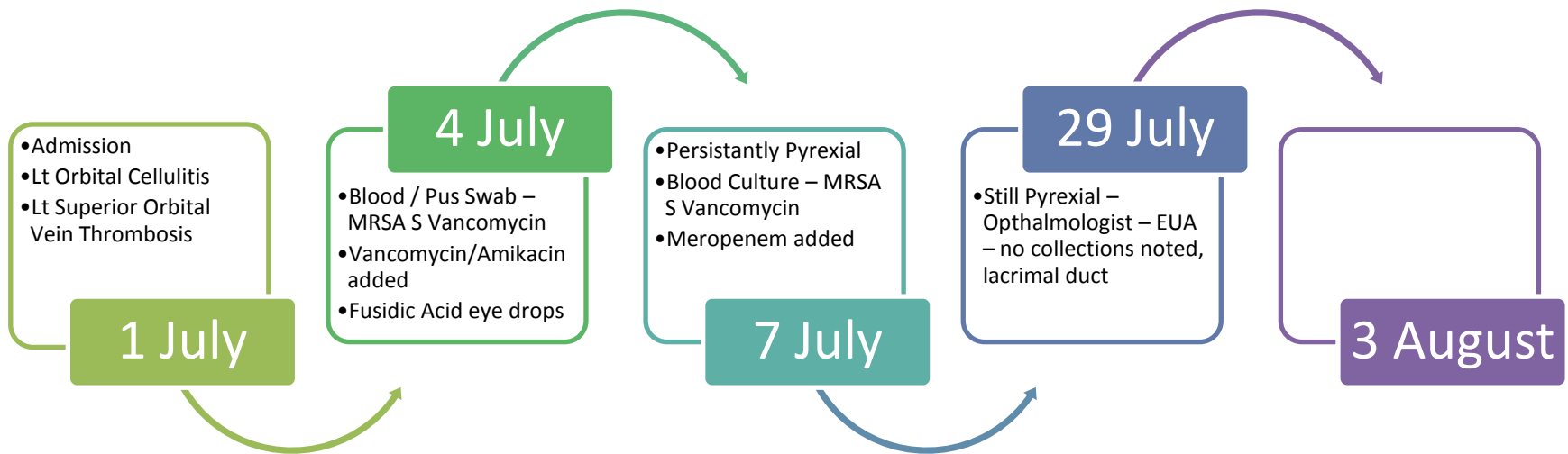
29 July

3 August

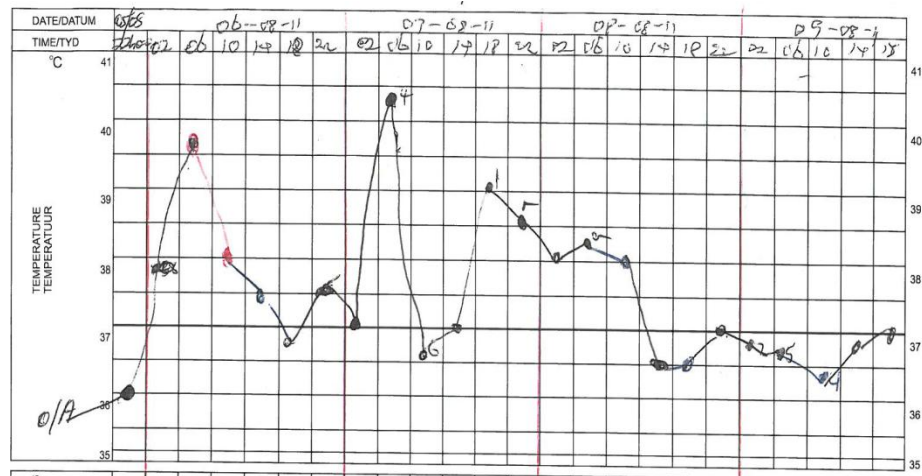
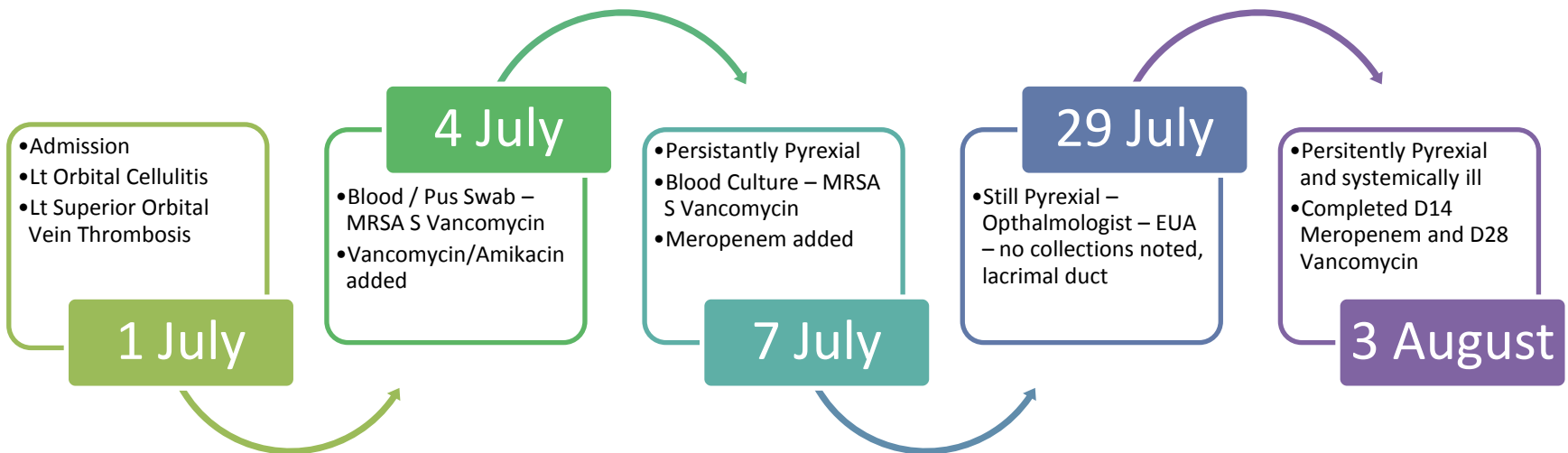


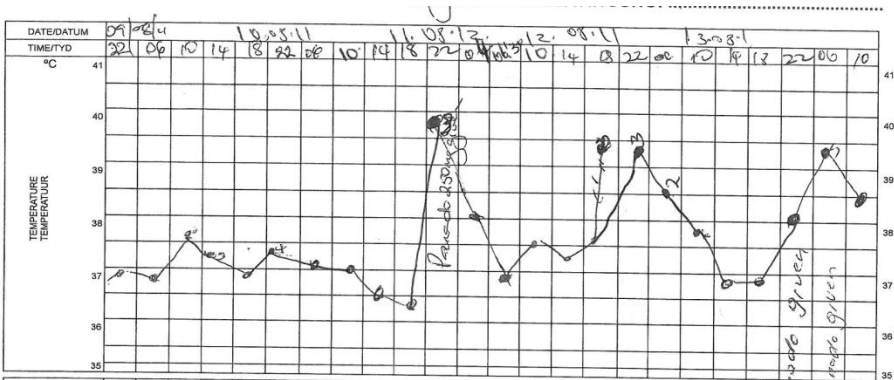
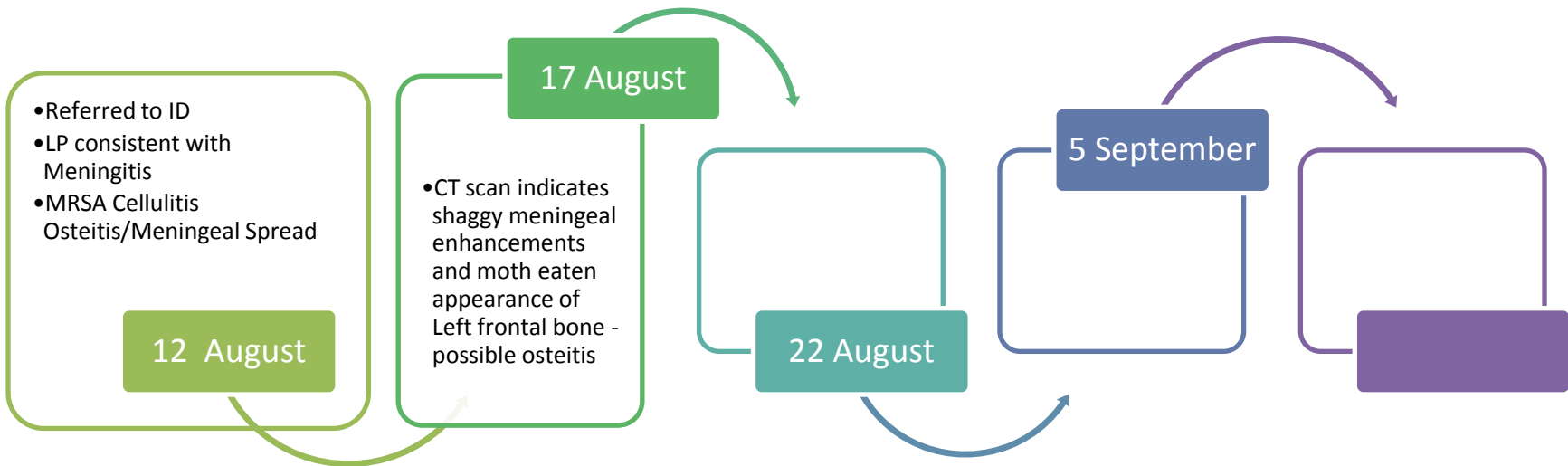
CA-MRSA





CT Scan (20/07) – Sub-galeal abscess with Bone erosions





- Therapeutic Options:
 - Vancomycin Infusion / Higher Dose
 - Vancomycin + Adjunctive agent (either Rifampicin or Clindamycin)
 - Linezolid

IDSA Guidelines 2010

VI. What is the management of MRSA infections of the CNS?

Meningitis

49. IV vancomycin for 2 weeks is recommended (B-II). Some experts recommend the addition of rifampin 600 mg daily or 300–450 mg twice daily (B-III).

50. Alternatives include the following: linezolid 600 mg PO/IV twice daily (B-II) or TMP-SMX 5 mg/kg/dose IV every 8–12 h (C-III).

51. For CNS shunt infection, shunt removal is recommended, and it should not be replaced until cerebrospinal fluid (CSF) cultures are repeatedly negative (A-II).

Brain abscess, subdural empyema, spinal epidural abscess

52. Neurosurgical evaluation for incision and drainage is recommended (A-II).

53. IV vancomycin for 4–6 weeks is recommended (B-II). Some experts recommend the addition of rifampin 600 mg daily or 300–450 mg twice daily (B-III).

54. Alternatives include the following: linezolid 600 mg PO/IV twice daily (B-II) and TMP-SMX 5 mg/kg/dose IV every 8–12 h (C-III).

Septic Thrombosis of Cavernous or Dural Venous Sinus

55. Surgical evaluation for incision and drainage of contiguous sites of infection or abscess is recommended whenever possible (A-II). The role of anticoagulation is controversial.

56. IV vancomycin for 4–6 weeks is recommended (B-II). Some experts recommend the addition of rifampin 600 mg daily or 300–450 mg twice daily (B-III).

57. Alternatives include the following: linezolid 600 mg PO/IV twice daily (B-II) and TMP-SMX 5 mg/kg/dose IV every 8–12 h (C-III).

Pediatric considerations

58. IV vancomycin is recommended (A-II).

V. What is the management of MRSA bone and joint infections?

Osteomyelitis

Pediatric considerations

47. For children with acute hematogenous MRSA osteomyelitis and septic arthritis, IV vancomycin is recommended (A-II). If the patient is stable without ongoing bacteremia or intravascular infection, clindamycin 10–13 mg/kg/dose IV every 6–8 h (to administer 40 mg/kg/day) can be used as empirical therapy if the clindamycin resistance rate is low (eg, <10%) with transition to oral therapy if the strain is susceptible (A-II). The exact duration of therapy should be individualized, but typically a minimum 3–4-week course is recommended for septic arthritis and a 4–6-week course is recommended for osteomyelitis.

48. Alternatives to vancomycin and clindamycin include the following: daptomycin 6 mg/kg/day IV once daily (C-III) or linezolid 600 mg PO/IV twice daily for children ≥ 12 years of age and 10 mg/kg/dose every 8 h for children <12 years of age (C-III).

- Referred to ID
- LP consistent with Meningitis
- MRSA Cellulitis Osteitis/Meningeal Spread
- Vancomycin/Clindamycin

12 August

17 August

- CT scan indicates shaggy meningeal enhancements and moth eaten appearance of Left frontal bone - possible osteitis

- Temperature settled
- Clinically improved
- Plan for Vancomycin/Clindamycin for 4-6 weeks

22 August

5 September

