

Antibiotic Prophylaxis in Cranio-Facial Trauma

Rationale: The purpose of antibiotic prophylaxis following cranio-facial trauma is to reduce the risks of meningitis, endophthalmitis, invasive device related colonization, and infectious complications of the head and neck including hardware infection and abscesses.

1. **ICP monitors and ventriculostomies (antibiotic impregnated EVD catheters):** Cefazolin 2 gm IV 30 minutes prior to insertion. No further dosing is needed.

2. **Ventriculostomies (non-antibiotic impregnated catheters):** Cefazolin 2 gm IV q8h x 24 hours (with first dose 30 minutes prior to insertion).

3. **Open-facial fractures:** For blunt or penetrating open facial fractures, recommend ampicillin/sulbactam 3 grams IV pre-operatively 30 minutes prior to incision and continued for 3 doses post-operatively. **Antibiotics should not be continued for >24 hours post-operatively.**

- **If the patient does not immediately go to the operating room, recommend administering ampicillin/sulbactam 3 grams IV q6h for 24 hours.** Administer routine perioperative antibiotics on day of operation. Antibiotics should not be continued for >24 hours post-operatively.

4. **Closed facial fractures:** For non-operative closed facial fractures, no prophylactic antibiotics are recommended. For operative closed facial fractures, the patient should only receive perioperative antibiotics.

5. **Open skull fractures (blunt or penetrating):** Ampicillin/sulbactam 3g IV q6h for 24 hours is recommended.

6. **Nasal packing:** No prophylactic antibiotics recommended while nasal packing is in place.

7. **CSF leak:** No prophylactic antibiotics recommended.

- For patients with a CSF leak, pneumococcal vaccination is recommended- 1 dose of pneumococcal 21-valent conjugate vaccine (Pneumovax 21 - Capvaxine)– *if the patient has previously received a pneumococcal vaccine, visit the [CDC website](#) for details regarding appropriate vaccine administration schedule).*

8. **Pneumocephalus:** No prophylactic antibiotics recommended.

9. **Open Globe Injuries:** Vancomycin (use dosing advisor in Epic) and cefepime **for 48 hours post admission** is recommended. Ceftazidime can be used as an alternative to cefepime depending on ID restrictions and drug shortages.

- Renal dosing for Cefepime:
 - CrCl >60: 2gm q8h
 - CrCl 30-60: 2gm q12h
 - CrCl 11-29: gm q12h
 - CrCl <10 or HD: 1gm q24h
 - CRRT: 1gm q8h

References

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