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:** Cefazolin 2 gm IV 30 minutes prior to insertion. No further dosing is needed.

2. **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.

3. **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.

4. **Open skull fractures (blunt or penetrating):** Ceftriaxone 2 grams q12h + Vancomycin (use dosing advisor in Epic) for 24 hours is recommended.

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

6. **CSF leak:** No prophylactic antibiotics recommended.
   - For patients with a CSF leak, pneumococcal vaccination is recommended (1 dose of PCV13 (Prevnar13®) followed by 1 dose of PPSV23 (Pneumovax23®) at least 8 weeks later – if the patient has previously received a pneumococcal vaccine, visit the [CDC website for details regarding appropriate vaccine administration schedule](https://www.cdc.gov/vaccines/schedules/downloads/adult/CDC-immuni.html).

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

8. **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

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**DIVISION OF TRAUMA AND SURGICAL CRITICAL CARE**
References:


Authors:

Jennifer Beavers, PharmD, BCPS
Caroline Banes, DNP, ACNP-CP, MSN, RN

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