

Gastric Aspirates: Patient Preparation and Procedure

SUPPORTIVE DATA:

Gastric aspiration is a technique used to collect gastric contents that can be used in the diagnosis of tuberculosis. Tuberculosis continues to be a problem and children are disproportionately affected, in part because they are more likely to get sick when they are infected with the TB organism. The increase in drug-resistant strains of TB makes it important to try to culture and identify each patient's TB organism.

Since many young children have difficulty in expectorating sputum, gastric aspirates are frequently required to culture the organism in a pediatric patient. When children with pneumonia sleep, their muco-ciliary mechanism sweeps mucus up their airways into their throat. They swallow the mucus and unless the stomach empties, a pool of mucus in the stomach may be a source of the TB organism.

Ideally the patient being prepared for an early morning gastric aspirate should sleep for at least six hours without interruption. They should not eat or drink anything overnight to prevent the stomach from emptying.

PATIENT PREPARATION:

1. Patient to be NPO after midnight.
2. The family should come to the clinic first thing in the morning. Any family members who could possibly have active TB should wear masks to prevent transmission to health care workers.
3. Place NG tube in patient. Do not use surgilube – it is bacteriostatic. Use as large a bore NG tube as is comfortable (minimum 10 french). Avoid too deep a placement to prevent passage through the pylorus.

SAMPLE COLLECTION:

1. Aspirate the stomach contents. If less than about 10 cc of mucus is aspirated, instill 20–30 cc of sterile water into the tube and quickly withdraw. (Note: the organism is most viable when not exposed to saline or preservatives; the kind of sterile water used for infant feeding is fine). Reposition the tube and/or the patient to maximize the yield of gastric contents.
2. Place the gastric aspirates in a special bicarbonate-containing gastric aspirate tube or regular specimen cup.
3. Transport the specimen to the microbiology lab. If a special bicarbonate containing tube or cup is not available, the lab must neutralize the stomach acid with bicarbonate within 1/2 hour.