

Rumenotomy

Intra-Operative Procedure

Rumenotomy is performed through a left paralumbar incision (a 20-cm incision generally is sufficient) with the animal standing. In large cows, the flank incisions for rumenotomies sometimes are made just caudal and parallel to the last rib, to place the incision closer to the reticulum. It is essential, however, to leave sufficient tissue caudal to the last rib for suturing. (The incision should be approximately 5 cm [2 inches] caudal to the last rib.)

Following opening and systematic exploration of the peritoneal cavity (no attempt is made to break down firm adhesions in the region of the reticulum), it is necessary to anchor the rumen to the incision to avoid contamination of the abdominal musculature and peritoneum during the rumenotomy procedure. A continuous inverting suture pattern (similar to a Cushing pattern) is used, to pull the rumen over the edge of the skin incision. This suture should be of heavy-gauge material such as nylon or polypropylene (Surgipro, Prolene). Two large, inverting sutures are placed at the ventral aspect of the incision so that the rumen projects well over the skin edge. This avoids contamination in the ventral region. Alternate techniques for isolating the rumen and preventing contamination include the use of stay sutures, a rubber rumenotomy shroud, a fixation ring (Weingart's),⁵ or a rumenotomy board. These alternatives are quicker than suturing the rumen, but they are also more easily displaced; the consequent contamination may be disastrous.

The rumen is incised with a scalpel taking care to leave enough room dorsally and ventrally for closure at the end of the procedure; and the operator, wearing long rubber gloves, evacuates and explores the rumen. A rumen shroud or a wound edge protector (3MTM Steri-Drape™) may be placed in the incision to prevent ingesta from accumulating at the incisional site and compromising wound healing. The inside of the rumen and the reticulum are explored; and, if a foreign body is present, it is removed. A large bore stomach tube, such as a Kingman tube, may be used to siphon out liquid contents.

To reach the reticulum from the rumenotomy incision, the dorsal wall of the rumen (where a natural air pocket exists) should be followed until it becomes the ventral wall, at which point one is in the reticulum. Following a direct line from the incision, one encounters ingesta as well as the cranial pillar of the rumen and ruminoreticular fold. To help locate foreign bodies, the reticulum can be gently picked up with the hand. The area where the foreign body is located usually has extended adhesions and cannot be picked up. This is an ideal area to look for foreign bodies by carefully palpating each "honeycomb" of the reticulum, as all but the slightest remnant of a linear metal foreign body may already have exited through the wall of the reticulum. Moreover, while exploring the inside of the reticulum, one should also feel for abscesses. Abscesses are frequently found on the medial wall of the reticulum near the

reticulo-omasal orifice. If abscesses are found, they should be evaluated. If the cow's economic value justifies the surgeon to proceed, abscesses that adhere to the reticulum should be lanced or drained. This is best accomplished by carrying a scalpel or scalpel blade, attached to a piece of string or umbilical tape in case it is dropped, into the reticulum and lancing the abscess into the reticulum through the adhesion. Following this exploration, the reticulum may be swept with a magnet to pick up additional metallic debris. A magnet is placed (or replaced) in the reticulum, and fresh rumen contents (if available) are placed in the rumen. Alkalinizing products may be inserted at this stage in cases of rumen overload, and mineral oil may also be instilled when indicated. The surgeon's contaminated gloves are then discarded.

The rumen incision is closed with a simple continuous pattern using of no. 1 or no. 2 synthetic absorbable material. A single layer can be adequate, but a double row is generally used with the second row an inverting pattern with similar suture material. The surgical site is thoroughly irrigated with polyionic fluid after closure of the lumen and any contaminated gloves, gowns, or drapes should be replaced prior to removal of the rumen-fixation suture and second layer closure. No further exploration of the abdominal cavity should be done after closure of the rumen. Closure of the laparotomy incision has been described previously.

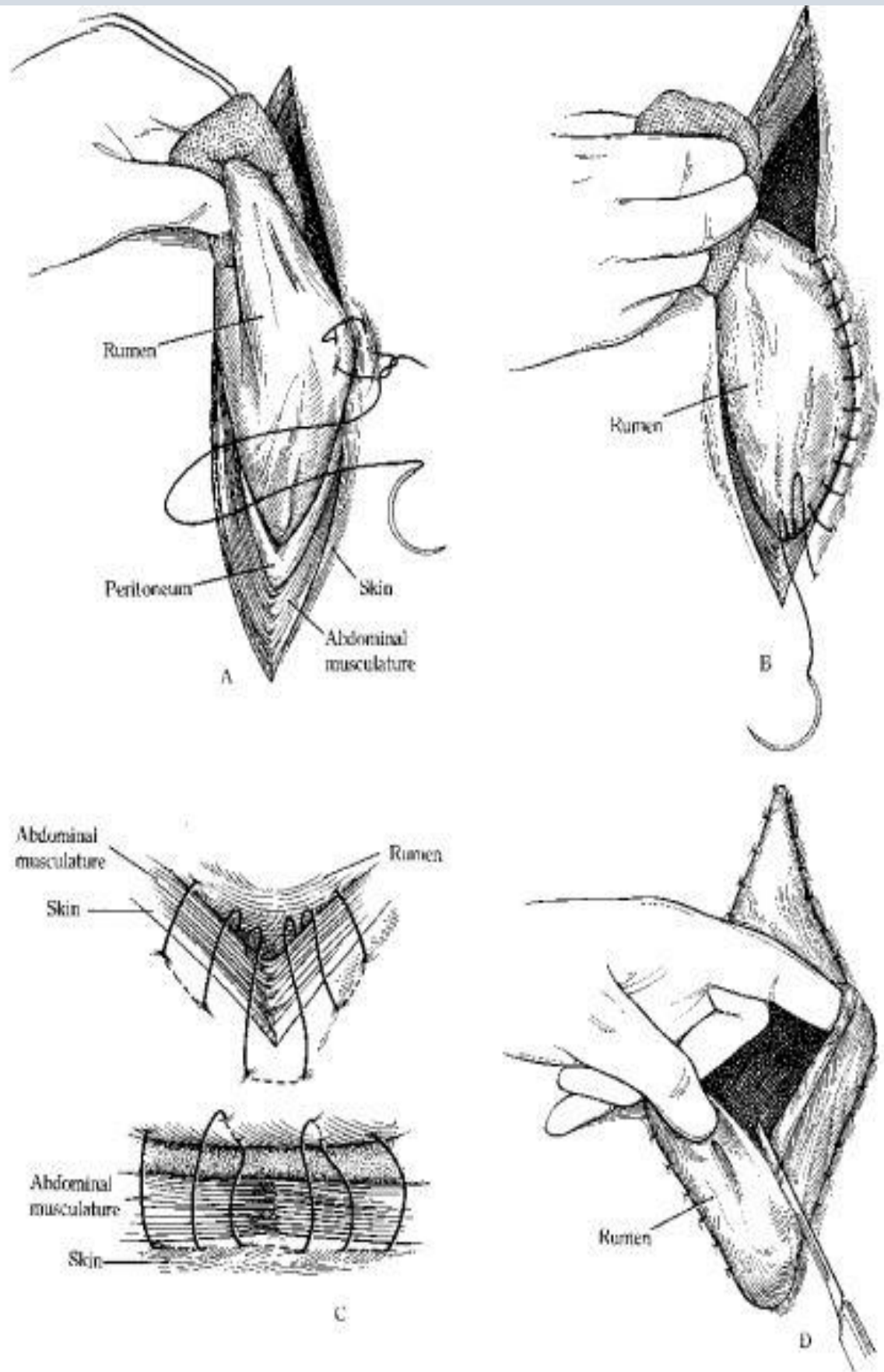


Fig. 132. A-F. Rumenotomy.

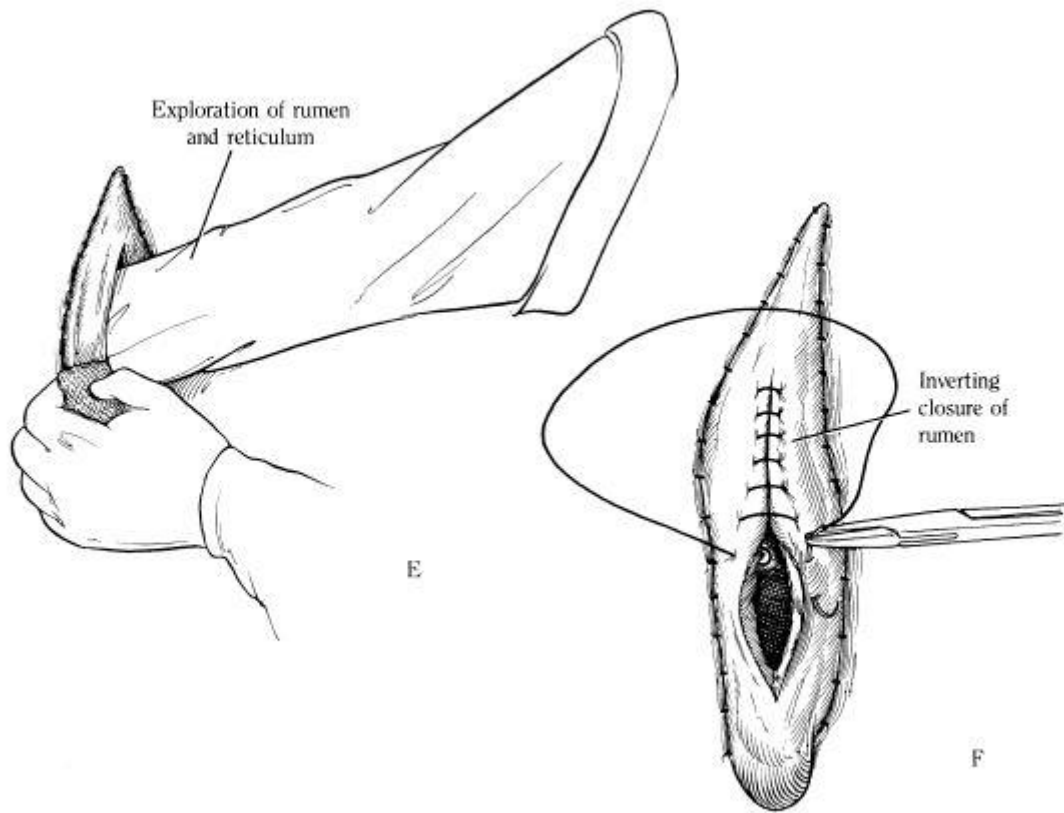


Fig. 13.2. *Continued.*