

FEATURES OF TERMINAL OSTOMY IN NEWBORNS

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Annotation: When speaking of an ostomy, it is usually done from the point of view of the surgical technique, without taking into account the wide range of biopsychosocial repercussions that this procedure produces in the ostomy patient: complications in self-care, low self-esteem, problems with body self-perception, changes in family and work relationships, etc. The nursing staff is responsible for teaching and assisting in each phase of this process, through comprehensive, individualized and quality care; in order to promote independence and quality of life both from the perspective of ostomy patients and that of their families and caregivers, assuming a great effort in their adaptation.

Key words: ostomy, newborn, enterostomy, obstructions, terminal, discrepancy

Ostomy is “a term used to designate a surgical procedure whose objective is to create an artificial connection between two hollow organs or a hollow organ and the skin,” the opening that is created is called a stoma; its role is to allow waste products to be excreted from the body.

Depending on the level at which the stoma is performed in the digestive system, one can speak of duodenostomy, jejunostomy, ileostomy, or colostomy. The main reason for performing a digestive ostomy is colorectal cancer, although it may also be recommended in inflammatory diseases (Crohn’s disease, ulcerative colitis), trauma, congenital diseases, malformations, and intestinal obstructions.

At our institution, we have observed adverse events in different surgical options for neonatal intestinal obstruction and found that Santulli enterostomy is superior to other procedures. With this accumulated experience, this technique has been attempted more frequently for various indications. This study aimed to evaluate and compare the clinical efficacy between Santulli enterostomy and double-/single-lumen ostomy in various emergency surgical conditions in newborns who required stoma. Herein, we report our experience to help more neonatal surgeons to understand and perform this end stoma, Santulli enterostomy provides early restoration of intestinal continuity without formal laparotomy. Short amputation of the common limb enables closure on a side to restore anatomic

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continuity without sacrificing valuable intestine; additionally, the procedure is simple and safe. Most newborns who require enterostomy might benefit from Santulli enterostomy; however, several pediatric surgeons lack information regarding this procedure. Therefore, we have reviewed our experience about Santulli enterostomy and explore the advantages and indications in neonatal intestinal conditions.

The clinical data of 76 neonates who underwent enterostomy were obtained. The patients were divided into two groups: the Santulli group with 33 cases who underwent Santulli enterostomy, and the control group with 43 cases who underwent double- or single-lumen ostomy. The general data of the two groups were analyzed, and the perioperative/postoperative complications, clinical data and the long-term outcomes were compared.

There was no difference in the demographic informations, the level of enterostomy, the rate of high-sight stoma, the operative time and bleeding of enterostomy between the two groups. Compared to the control group, the operative time of ostomy closure was less in the Santulli group (53.00 vs. 152.47, $P < 0.001$). The duration of parenteral nutrition (27.45 vs. 44.56, $P = 0.010$), the mean interval of initial enterostomy to stomal closure (131.21 vs. 216.42, $P < 0.001$), and length of stay (46.00 vs. 67.60, $P = 0.007$) were shorter, while the incidence of postoperative complications and hospitalization costs (11.21 vs. 15.49, $P = 0.006$) were lower. The Santulli procedure can reduce the morbidity of high output ostomy (2 vs. 10, $P = 0.042$) and short bowel syndrome (3 vs. 132, $P = 0.025$), shorten the discrepancy of diameter between the proximal and distal segments, maximize the available intestine, and monitor the movement of the distal bowel. The length of incision was shorter, and the catch-up growth was significantly faster in the Santulli group. Santulli enterostomy is a superior procedure in the treatment of neonatal intestinal conditions, in terms of fewer complications, faster catch-up growth, shorter hospitalization time and treatment duration. It should be the procedure of choice in several newborns with intestinal conditions that require ostomy.

Terminal ostomy in newborns refers to a surgical procedure where an opening is created in the abdominal wall to divert the flow of fecal matter or urine from the intestines or urinary tract to an external pouch. This procedure may be necessary in newborns with certain medical conditions that require temporary or permanent diversion of waste products. Here are some key features of terminal ostomy in newborns:

1. Indications: Terminal ostomy in newborns may be indicated for various medical conditions, such as congenital anomalies of the gastrointestinal tract (e.g., imperforate anus, Hirschsprung's disease), inflammatory bowel disease, necrotizing enterocolitis, or traumatic injuries to the intestines or urinary tract.
2. Types of Ostomies: In newborns, common types of terminal ostomies include colostomy (diversion of the colon), ileostomy (diversion of the ileum), and urostomy (diversion of the urinary tract). The type of ostomy performed depends on the underlying condition and the specific needs of the newborn.
3. Surgical Procedure: The surgical procedure for creating a terminal ostomy in newborns involves making an incision in the abdominal wall, bringing a segment of the intestine or urinary tract to the surface, and creating a stoma (opening) through which waste products can pass into a collection pouch. The procedure is typically performed under general anesthesia by a pediatric surgeon.



4. **Stoma Care:** Proper care of the stoma is essential to prevent complications such as infection, skin irritation, or leakage. Stoma care involves regular cleaning, application of a skin barrier, and monitoring for signs of infection or other issues. Specialized ostomy products designed for newborns may be used to ensure proper hygiene and comfort.

5. **Nutritional Considerations:** Newborns with terminal ostomies may require special nutritional support to ensure adequate growth and development. A healthcare provider, such as a pediatric gastroenterologist or dietitian, may provide guidance on feeding strategies, nutrient supplementation, and monitoring growth parameters.

6. **Psychosocial Support:** Terminal ostomy in newborns can have a significant impact on the emotional well-being of parents and caregivers. Providing psychosocial support, education, and resources to help families cope with the challenges of caring for a newborn with an ostomy is an important aspect of comprehensive care.

7. **Follow-Up Care:** Regular follow-up visits with healthcare providers are essential to monitor the newborn's progress, assess stoma function, address any complications, and make adjustments to the treatment plan as needed. Close communication between the healthcare team and the family is crucial for optimizing outcomes and ensuring the newborn's well-being.

8. **Potential Complications:** Complications associated with terminal ostomy in newborns may include stoma prolapse, stenosis (narrowing of the stoma), skin breakdown, herniation around the stoma site, or electrolyte imbalances. Prompt recognition and management of complications are important to prevent further health issues.

In summary, terminal ostomy in newborns is a complex surgical intervention that requires specialized care and attention to ensure optimal outcomes. By considering the features outlined above and providing comprehensive support to newborns and their families, healthcare providers can help manage terminal ostomies effectively and improve the quality of life for these vulnerable patients.

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