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症 例

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## Two Cases of Coloplasty for Congenital Short Colon

by

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Congenital short colon is a comparatively uncommon disease. As ileostomy after resection of the short colon has been an operative procedure usually carried out in these infants, coloplasty and anoplasty were attempted to preserve colonic function and normal bowel movement in two patients with congenital short colon accompanied by imperforate anus.

### Report of Patients

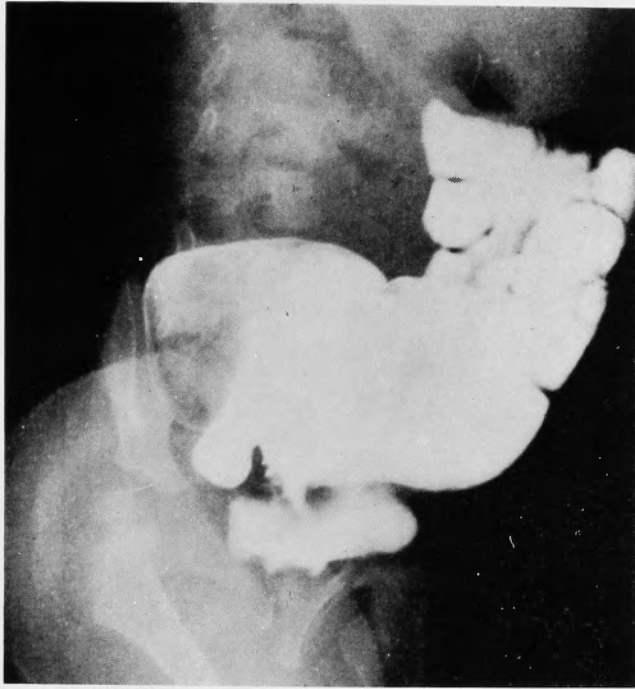
Patient 1. In 1969, a female infant, birth weight 2,900g, was admitted to the Tohoku University Hospital fifteen hours after birth because of imperforate anus. A tremendously dilated large bowel was found on a plain film. At the operation on the first day of life, a large but short colon and Meckel's diverticulum were found. An intestinal fistula was made using the diverticulum. Her postoperative course was uneventful and she was discharged on the 45th day after operation. She was readmitted to the hospital at 10 months of age for a definitive operation. After examinations, she was diagnosed to have congenital short colon with imperforate anus and suspected of recto-urinal fistula (Fig. 1). A dilated short colon, Meckel's diverticulum, duplication of the appendix and colovesical fistula were confirmed at the second operation.

The colon measured 7/15cm and its wall was hypertrophic. After excision of the diverticulum with the intestinal fistula and two appendixes, the huge colon was divided and elongated preserving vessels as shown in Fig. 2. After resection of the colovesical fistula, anoplasty was performed in a usual manner for imperforate anus. Her postoperative course was smooth. The histological findings of the colon was nearly normal. Bowel movement was good and incontinence was not seen in this

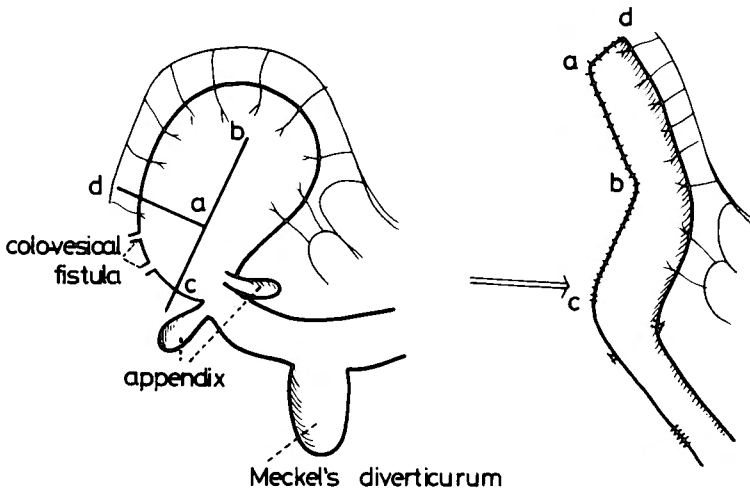
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Key words : Coloplasty, Congenital Short Colon

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**Fig. 1** X-ray findings of the colon with barium in patient 1. This picture shows two fistulae between dilated colon (upper portion) and urinary bladder (lower portion.)



**Fig. 2** The method of coloplasty in patient 1. Meckel's diverticulum and two appendixes were excised and colon was divided at the plane "d-a" and "b-c", and fashioned as the right figure. Anoplasty was made with the reconstructed colon after resection of the colovesical fistula.

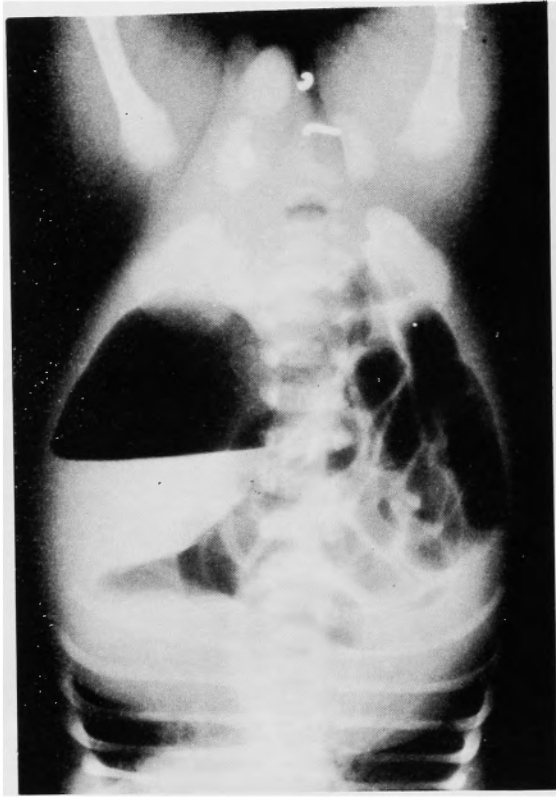


Fig. 3 The plain film of the abdomen in up side down position in patient 2 shows a huge gas-filled colon on the left side.

patient.

Patient 2. In 1972, a male infant, birth weight 3,100g, was admitted to the Tohoku University Hospital 2 days after birth because of imperforate anus. A x-ray film showed a marked dilatation of colon (Fig. 3). At the operation on the third day of life, the large bowel was found and a double barreled ileostomy was placed. The colon measured  $8 \times 14$ cm. He was discharged 14 days later in good general condition. A definitive operation was performed at 16 months of age. Marked dilated short colon and a large diverticulum of urinary bladder were found at the operation. Coloplasty was performed as shown in Fig. 3 for the purpose of preservation of the colonic function and followed by anoplasty. Furthermore, ileostomy was made in this patient. The histological findings of the colon were normal. The stoma of the ileostomy was closed 49 days after operation. His postoperative course was uneventful and he was discharged 13 days after the last operation.

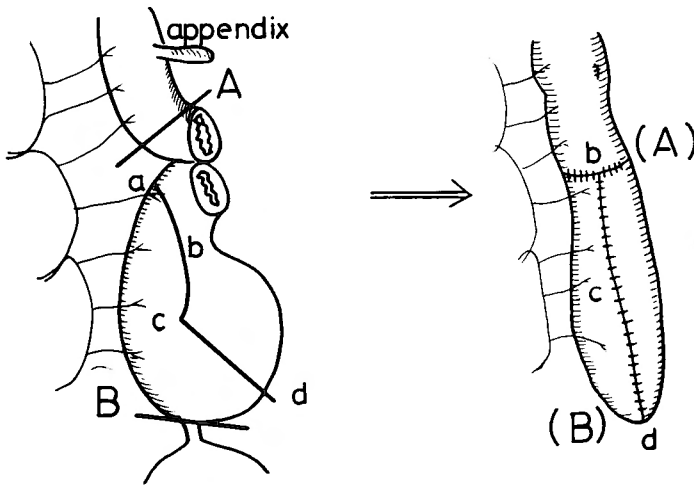
#### Discussion

Up to the present, five different types of short colon have been documented in the world literature (Table 1).

**Table 1.** Types of Short Colon

1. Agnesis of colon
2. Short colon without imperforate anus
3. Short colon with imperforate anus  
(dilated colon)
4. Short colon as a part of the exstrophy  
of the cloaca  
(small and narrow colon)
5. Short colon due to abnormal vessels and  
the like

Agnesis of colon<sup>1,2</sup> or short colon with out imperforate anus<sup>3,4,5</sup> is rare and these anomalies were incidentally found when a laparotomy was carried out for other diseases. Short colon associated with exstrophy of the cloaca<sup>6</sup> is most common. Almost all of these cases have imperforate anus, and the colon is small, short and occasionally, vestigial. Short colon with imperforate anus is the second most



**Fig. 4** The method of coloplasty in patient 2. Appendix was excised and colonic graft with a vascular pedicle was made at the plane A. B (fistula between dilated colon and diverticulum of urinary bladder) and plane "a-b-c-d". Coloplasty was made with the graft as on the right side. Anoplasty was made with this reconstructed colon.

common type.<sup>7,8,9,10,11</sup> The bowel is short but it dilates and hypertrophies up to size of basketball. Most of the reported cases have been subjected to resection of the dilated short colon followed by ileostomy. However, the histological findings of the dilated colon is almost normal and the possibility of peristalsis and physiological function may be preserved. Therefore, we preserved the dilated short colon at the first operation, and carried out coloplasty with anoplasty at the second operation in two cases. The postoperative course may be comparatively good.

### Summary

Coloplasty with dilated short colon was made in two patients of congenital short colon. Since the histological findings are almost normal and the function of the colon may be preserved, coloplasty is worth trying.

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## 和文抄録

## 先天性短結腸症に対し結腸形成術を施行した2症例

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先天性短結腸症は稀な疾患であり、種々の合併奇型を有する例も多く、一般には、人工肛門造設、あるいは腸瘻造設が行なわれている。しかし結腸の機能はある程度保たれているものと考えられ、また患者の人工

肛門に対する苦痛を考へて、われわれは、2例の短結腸症に対し、結腸形成術を施行し、結腸の延長と保存を試みた。術後の経過は比較的良好であり、本症に対し結腸形成を行なう事は有効であると思われる。