

: 1

### Duplication of the Transverse Colon: A Case Report

Yong Wn Kang, MD., Wn Kap Park, MD., Jong Kyun Lee, MD., Kwang Yun Kim, MD.

Department of Surgery, Song Do Colorectal Hospital, Seoul,

Duplications of the alimentary tract are rare malformations and accurate diagnosis is difficult. Duplications can occur at any level in the gastrointestinal tract. Small intestinal duplications are the most common while colonic duplications are rare. Duplications are usually single, vary in size, are more often spherical than tubular and are covered by alimentary tract mucosa. They usually share a common smooth muscle wall and blood supply with the adjacent bowel, with which they may be communicated. Some duplications are asymptomatic but more than 80% of cases are present before age of 2 years. Recently, we have reported a case of duplication of the transverse colon in a 9-year old female patient without any other congenital anomalies. The chief complaint were palpable abdominal mass, defecational difficulty and intermittent cramp of abdomen. The duplication of the transverse colon was diagnosed at operation. A left hemicolectomy was performed with complete resection of duplicated bowel. We report a case of colonic duplication and review the literature. **J Korean Soc Coloproctol 2002;18:59-63**

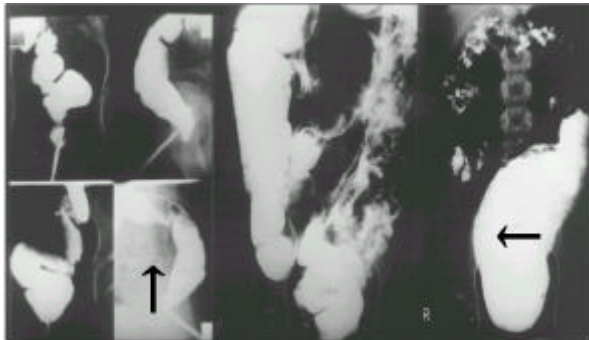
**Key Words :** Duplication, Colon, Congenital anomaly

Ladd가

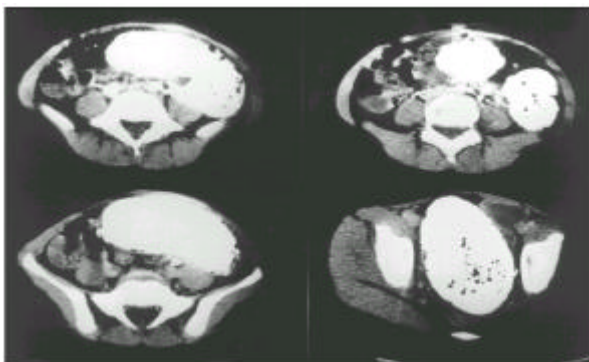
: , 3 366-144  
 ( : 100-453)  
 Tel: 02-2231-0900, Fax: 02-2234-7243  
 E-mail: kyw1114@unitel.co.kr  
 2001

2 63 83%가 2-4  
 가  
 12%  
 가 2,3,5-7  
 , Meckel  
 ,  
 2,7-10 12,13  
 14-17 18-20  
 가 9  
 1  
 : , 9  
 :  
 : 1  
 . 2  
 가 가  
 7  
 가 가  
 가 :  
 :  
 , 136.6 cm 29 kg

가  
 10×20 cm  
 :  
 Hb/Hct (6.7 g/26%)



**Fig. 1.** Barium enema: It demonstrates a distal large bowel with normal diameter but secondary shadow representing the duplication of the colon (arrows) was not initially appreciated.



**Fig. 2.** CT of abdomen and pelvis: Large amount of retained barium and fecal material in the distal colon.

S

24

가 S

(Fig. 1).  
 S

(Fig. 2).

S

가

가

× 10 cm

30

)

(Fig. 3).

-S

30 cm, 20 cm  
 1.5 cm

10 cm

가

(Fig. 4).

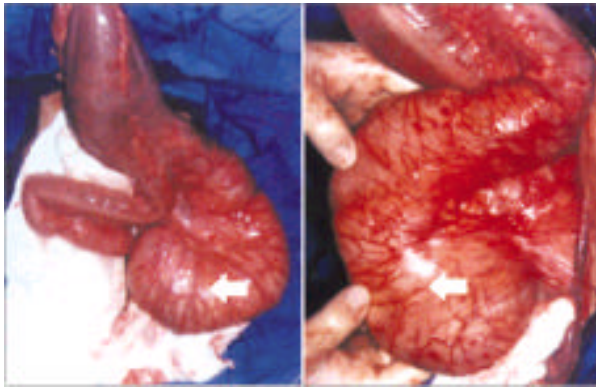
(Fig. 5),

(Fig. 6).

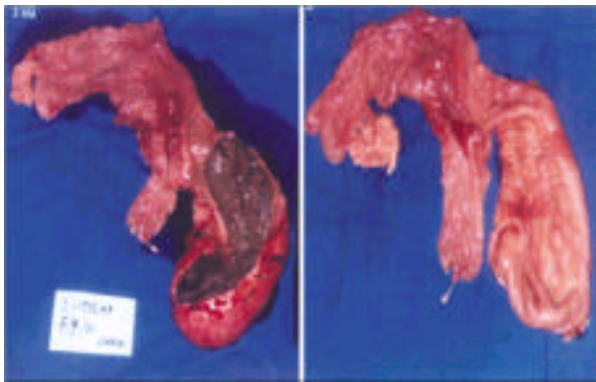
1 2

10

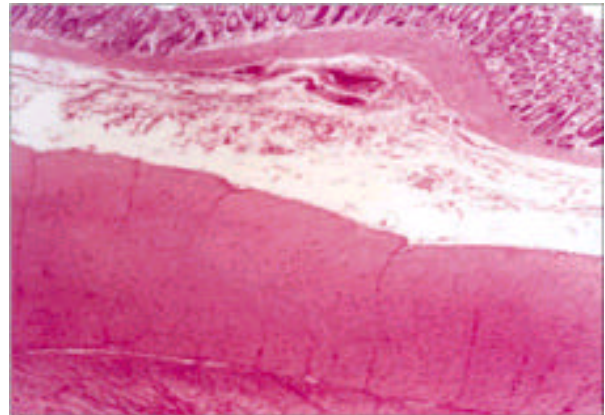
1



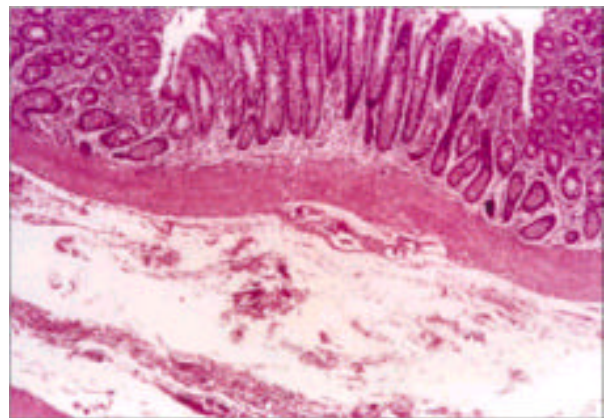
**Fig. 3.** Operative findings showing the tubular colonic duplication (arrows) parallels the true colon into the pelvis.



**Fig. 4.** Specimen of the resected duplicated colon with normal distal transverse colon and descending colon. The duplicated segment becomes a reservoir for retained stool.



**Fig. 5.** Microphotography of the duplication wall. Thickening with hypertrophy of the muscularis mucosae and proper muscle coats is remarkable (H&E stain,  $\times 10$ ).



**Fig. 6.** Histologic feature of the mucosa and submucosa of the duplication wall. A shallow depressed ulcer at the mucosal surface is of stercoral type. No heterotopic gastric glandular epithelium is present in the ulcer bed (H&E stain,  $\times 40$ ).

1884 Fitz가 (Duplication)

Meckel

Ladd Gross<sup>1</sup> 3가

(1)

(2)

(3)

1908 Lewis Thyng persistent embryonic diverticular theory, (2) 1944 Bremer<sup>21</sup> aberrant luminal recanalization theory, (3) 1960 Bentley<sup>22</sup> split notochord theory (neural tube traction mechanism), (4) twinning procedure

1947 가 가

가 가

가

<sup>23</sup>

early twinning

4가

가

가

5



7. Favara BE, Franciosi RA, Akers DR. Enteric duplications. Thirty-seven cases: a vascular theory of pathogenesis. *Am J Dis Child* 1971;122:501-6.
8. Stringer MD, Spits L, Abel R, Kiel YE, Drake DP, Agrawal M, et al. Management of alimentary tract duplication in children. *Br J Surg* 1995;82:74-8.
9. Ravitch MM. Hindgut duplication: Doubling of colon and gut. *Ann Surg* 1953;137:588-601.
10. Okur H, Keskin E, Zorludemir U, Olcay I. Tubular duplication of the hindgut with genitourinary anomalies. *J Pediatr Surg* 1992;27:1239-40.
11. Posthuma N, Van Schaik C, Meuwissen SGM, Cuesta MA. Tubular colonic duplication with unilateral renal hypoplasia. *Am J Gastroenterology* 1991;12:1833-5.
12. , , . 1996;51:444-7.
13. , , , , . 1 . 1986;31:641-6.
14. , . 1996;50:441-6.
15. , , , , . 1992;42:135-9.
16. , , , . 1 . 1991;40:403-7.
17. , , . 2 . 1971;13:45-9.
18. , . 1989; 37:130-4.
19. , , , . Total Colonic Duplication 1 . 1985;28:263-8.
20. , , , . S- 1 . 1982;24: 342-5
21. Bremer JL. Diverticula and duplications of the intestinal tract. *Arch Pathol* 1944;38:132-40.
22. Bentley JFR, Smith JR. Developmental posterior enteric remnants and spinal malformation. *Arch Dis Child* 1960; 35:76-86.
23. Ravitch MM, Scott WW. Duplication of the entire colon, bladder and urethra. *Surgery* 1953;34:843-58.
24. Ross M, Karen M, Kathleen D, Thomas M. Colovesical fistula resulting from a perforated colonic duplication. *Pediatr* 1988;102:654-6.
25. Bidewell JK, Nelson A. Prenatal ultrasonic diagnosis of congenital duplication of the stomach. *J Ultrasound Med* 1986;5:589-90.
26. Tanabe ID, DiTomaso A, Pinkas H, Pencev D. Massive GI hemorrhage from an ileal duplication cyst in an adult. *Am J Gastroenterol* 1995;90:504-5.
27. Dominguez R, Rott J, Castillo M, Pittaluga RR, Corriere JN. Caudal duplication syndrome. *Am J Dis Child* 1993; 147:1048-52.
28. Bajpai M, Mathur M. Duplications of the alimentary tract: clues to the missing links. *J Pediatr Surg* 1994;29: 1361-5.
29. Michael P, La Quaglia, Feins N, Erakis A, Hendren WH. Rectal duplications. *J Pediatr Surg* 1990;25:980-4.
30. Orr MM, Edwards AJ. Neoplastic change in duplications of the alimentary tract. *Br J Surg* 1975;62:269.