

A way to reduce the risk of complications during pull-through procedure in children with Hirschsprung's disease

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In children with Hirschsprung's disease, the upper rectal, sigmoid, left colon arteries are ligated during the pull-through of the descending part of the colon. As a result, the inferior mesenteric artery ceases to participate in the blood supply to the descending part of the colon. Insufficiency of blood supply to the reduced colon is the cause of the development of anastomotic leaks, chronic hypoxia of the intestinal wall or necrosis of the reduced descending colon. The highest frequency of anastomotic leaks is observed in children older than 5 years.

The purpose is to reduce the risk of complications in pull-through procedure of the descending part of the colon in patients with Hirschsprung's disease by ensuring its sufficient mobility and maintaining blood supply to the lower mesenteric artery.

Methodology and events: Two children aged 5 and 7 years with Hirschsprung's disease were operated a new technique for mobilizing the colon.

Operational technique: Mobilization of the affected sigmoid and rectum was performed preserving arterial and venous terminal arcades of the sigmoid vessels. Then, the left colon artery was crossed. This manipulation provides additional mobility of the pull-through descending part of the colon. The resulting "window" in the mesentery of the reduced intestine were sutured to prevent the development of an internal hernia.

Full-blooded, sufficiently long transplant from the descending parts of the colon with blood supply from the upper and lower mesenteric artery, freely, without tension, is reduced to the rectal zone with the coloanal anastomosis.

Results: The postoperative period was uneventful. In no case there was a bowel retraction, anastomotic leak, anastomotic stenosis, or other complications.

Conclusion: The technique allows reducing the risk of anastomotic leak, bowel necrosis, chronic ischemia, to exclude colon retraction and anastomotic stenosis.

Biography

He is affiliated to Astana Medical University, Kazakhstan. He is a recipient of many awards and grants for his/her valuable contributions and discoveries in major area of surgery research. His international experience includes various programs, contributions and participation in different countries for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

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