

Hirschsprung disease occurs when nerve cells in the colon do not develop normally before birth and the bowel is unable to move its contents along. Severe bowel obstruction and even perforation can then occur. The condition is usually diagnosed within the first months of life, but can be found in older children as well.

Hirschsprung disease affects most frequently the distal bowel propulsive function, and it occurs in about 1 in 5,000 live births. The condition is treated surgically, and poor outcomes can sometimes require further surgery. A new study recommends an intraoperative histological evaluation that could offer a better assessment of the bowel nervous system, leading to more successful procedures.

Bowel function is restored by surgically removing the nonfunctioning segment of the bowel, then using a “pull-through” procedure that repairs the colon by telescoping functional bowel down into the anus. Normally innervated bowel tissue is needed for a successful outcome. A common reason for a poor postoperative outcome is the use of bowel for the pull-through that has abnormal innervation. A transition zone, consisting of a segment of bowel between the normal and abnormal sections of the bowel that can give the appearance of normal functioning, must also be removed.

The current issue of the journal *Pediatric and Developmental Pathology* reports on a study of 30 patients at the Colorectal Center for Children at the Cincinnati Children’s Hospital Medical Center. These patients underwent reoperation and removal of the bowel segment used unsuccessfully during the initial surgery. Researchers examined records and slides from the primary operations and fresh tissues from the secondary surgeries.

To determine the suitability of bowel to be used, the authors of this study recommend histological confirmation of the presence of both ganglion cells and normal-caliber nerves circumferentially. This research found 16 cases in which abnormalities were found microscopically; in these cases, the patients improved following reoperations. The use of intraoperative consultation during the primary procedure should include frozen section evaluation of the entire circumference of the bowel at the point to be used to connect the pulled-through bowel down to the anus.

Full text of the article, " Reoperation for Hirschsprung Disease: Pathology of the Resected Problematic Distal Pull-Through ," *Pediatric and Developmental Pathology* , Vol. 15, No. 1, 2012, is available at http://www.pedpath.org/toc/pdpa/15/1 .

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