New method of transanal pull through operation in patients with hirschsprungs disease

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Sir,

Hirschsprungs disease is an enteric nervous system dysfunction. Although, several types of pull through operations exist for this condition, each has its own pros and cons. The latest method of transnal soave pull through operation is usually performed much more frequently.[1-4] However, this method is associated with soilage in many patients because the myotomy of the soave cuff or excess retraction destroys the symmetry of high pressure zone of anal sphincter. We improved on this method by some essential modifications to conserve the symmetry of sphincter and also made the operation easier with less associated complications.

During the period of month between January 2011 and February 2012 we performed a new method of transanal soave pull through after obtaining parental consent and ethical approval on 50 cases of Hirschsprungs disease. Mucosectomy was started 1.5 cm above the dentate line as in classic soave. Once frozen biopsy showed ganglion cells the mucosal dissection and normal calibre colon reached, the dissection was stopped and a four quadrant myotomy on soave cuff done. The mucosal cuff was resected and full thickness anastomosis done above dentate line over a rectal tube. All patients started feeding on the second day of operation.

The patient were followed-up post-operatively with endorectal sonography and anorectal manometry to detect the intactness of external and internal sphincter; this was followed by an incontinence score.[3-6]

The mean age was 4.5 years (range 1-3 years). Internal sphincter pressure ranged from 29.6 ± 6.7 mmHg before intervention to 37.5 ± 6.5 mmHg after intervention and 48.4 ± 8.3 mmHg 6-month after study ($P < 0.0001$). Defecation pattern score changed from 7.4 ± 1.9 to 6.1 ± 1.4, 6 month after study ($P = 0.002$).

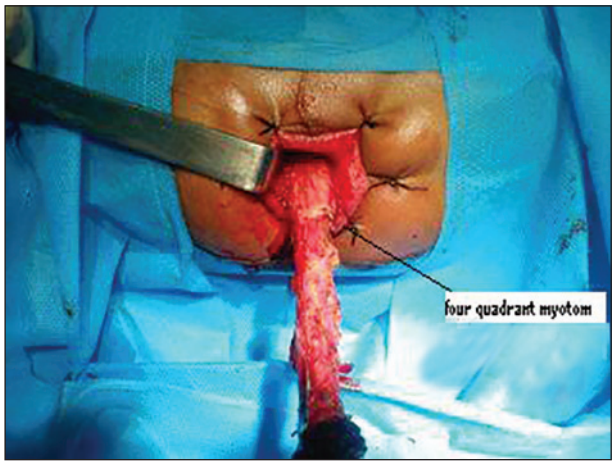
Early obstruction occurred in 20 of them, but it was relieved by rectal dilatation for 2-month. Three cases developed anal stenosis that underwent reoperation. There was no anastomotic leak or peritonitis.

Pull through operation remains the gold standard for treating Hirschsprungs disease. It was considered as a major operation with major complications such as anastomotic leak and incontinence. However, the present method, by avoiding opening the peritoneal cavity and saving the configuration of sphincter complex, appears to have fewer complications. The problem of post soave cuff obstruction was obviated by avoiding the wrapping muscle cuff around full thickness of colon. We a larger scale trial of this method and hope that it may lessen the number and degree of complications usually associated with transanal pull through operations.

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REFERENCES

1. Dehghan AA, Hosseini MV, Rahimi A, Zare S, Khazdooz M, Khoshnavaz R, *et al*. Transanal endo rectal pull-through versus trans abdominal pull-through in management of hirschsprungs diseas. Hormozgan Med J 2013;17:1-7.
2. Hosseini SM, Zarenezhad M, Sabet B, Maleki M. Bulking agent injection for fecal incontinence in patients with anorectal malformation. Archives of international surgery Journal2012;2:70-3.
3. Hosseini SM, Foroutan HR, Bahador A, Khosravi MB, Geramizadeh B, Sabet B, *et al*. Role of rectal biopsy in predicting response to intrasphincteric botulinum toxin injection for obstructive symptoms after a pullthrough operation. Indian J Gastroenterol 2008;27:99-102.
4. Foroutan HR, Hosseini SM, Banani SA, Bahador A, Sabet B, Zeraatian S, *et al*. Comparison of botulinium toxin injection and posterior anorectal myectomy in treatment of internal anal sphincter achalasia. Indian J Gastroenterol 2008;27:62-5.
5. Hosseini SM, Foroutan HR, Zeraatian S, Sabet B. Botulinium toxin, as bridge to transanal pullthrough in neonate with hirschsprungs disease. J Indian Assoc Pediatr Surg 2008;13:69-71.
6. Hosseini SM, Zarenezhad M, Hedjazi A, Khazdooz M, Falahi S. Treatment of constipation in children based on anorectal manometery findings. Ann Niger Med 2012;6:22-5.