

## F41

**Changing pattern of surgical management of haemorrhoids. An Italian survey on over 32000 patients**

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**Aim:** Haemorrhoid management has changed in the last two decades, with new insight into pathophysiology and because of availability of new surgical devices. The aim of this survey was to evaluate how the surgical choice in the management of haemorrhoids has changed in Italy over the last 17 years.

**Method:** Data on haemorrhoid treatments between 200–2016 were obtained by electronic database of 18 Italian colorectal Centers.

**Results:** Overall 32458 patients were treated for haemorrhoids. 7542 patients had II-degree, 15360 III degree and 9556 IV degree haemorrhoids. In grade II 90% were treated conservatively with Rubber Band ligation (RBL) and in grade IV 90% had a Milligan Morgan (MM) without major changes over the years. In grade III, use of stapled haemorrhoidopexy, progressively decreased from 30–35% to 5% of the cases and, from 2006, the use of DGHAL with mucopexy increased from 6 to 24%. Over the years, the percentage of MM remained between 65% and 70% of cases.

**Conclusion:** This survey has demonstrated relevant changes in the surgical choice of haemorrhoids treatment. This was particularly true for grade III haemorrhoids where MM remains the main choice; PPH has decreased significantly and the use of DGHAL with mucopexy is growing.

## F42

**Inpatient hemorrhoids: trends and outcomes from the healthcare cost and utilization project National Inpatient Sample (NIS)**

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**Aim:** Inpatient management of hemorrhoids can be triggered by bleeding and other complications. Here we review national trends of inpatient hemorrhoidectomy as captured by a national database.

**Method:** NIS database was queried for hemorrhoidectomies (20% US hospital admissions, 1998–2013). Patients were grouped by procedure. Patient demographics and postoperative outcomes were compared over time and by procedure group.

**Results:** Of 44,471 patients, 16.7% underwent ligation, 72.4% excision, 3.5% evacuation, and 7.5% another hemorrhoid procedure. Ligation procedures increased (11.1% to 29.5%) and excision decreased (79.7% to 56.8%,  $P < 0.0001$ ). There was increase in mean age ( $54.7 \pm 17.3$  yr to  $56.9 \pm 17.9$  yr  $P < 0.0001$ ), and Charlson Comorbidity Index (CCI  $0.6 \pm 1.3$  to  $1.4 \pm 2$ ,  $P < 0.0001$ ). Emergency department utilization increased 44.3% to 59% (2007 to 2013,  $P < 0.0001$ ), and elective cases decreased 47.4% to 25.1% (2002 to 2013,  $P < 0.0001$ ). Overall complication rate decreased over time (12.8% to 6.8%,  $P < 0.0001$ ). This trend persisted on multivariate analysis across all years examined, with ligation having highest complication rate, followed by excision, then evacuation.

**Conclusion:** Sixteen years of data reveals a decrease in postoperative complications despite increasingly comorbid patients undergoing non-elective inpatient hemorrhoidectomy. The inpatient treatment of this traditionally outpatient procedure reflects changing trends in presentation and management.

## F43

**Results of using the modified FiLaC technology in patients with trans- and extrasphincteric anal fistulas**

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**Aim:** To conduct a comparative retrospective and prospective cohort study of short-term and remote results of treatment of transsphincteric and extrasphincteric fistulas of III-IV grade of complexity using modified FiLaC technology and standard fistulectomy.

**Method:** The patients were divided into two groups. Modified FiLaC technology was used for the treatment of fistulas in the main group ( $n = 40$ ). Standard fistulectomy with excision of the fistula's inner opening into the lumen of the anal canal and excision of cicatricial and purulent-inflammatory perineal tissue was used in the control group ( $n = 43$ ).

**Results:** The relapse of rectal fistula after surgery was observed in 17.5% in the main group and in 37.2% ( $P < 0.05$ ) in the control group. In the prevailing number of cases (92.5%), incontinence was absent in the main group. The condition of the anal continence did not change in the main group, and in the control group 6 previously operated patients noticed deterioration of the anal continence.

**Conclusion:** Thus, modified FiLaC technology in comparison with the standard fistulectomy accelerates the healing time of the fistula by 42% ( $P < 0.05$ ), reduces the number of relapses to 17.5% ( $P < 0.05$ ), does not affect the consistency of the anal sphincter.

## F44

**Long-term follow-up of anal fistula plug to treat trans-sphincteric fistulas**

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**Aim:** To evaluate long-term success rate of Biodesign<sup>®</sup> anal fistula plug for treatment of high trans-sphincteric anal fistulas.

**Method:** A prospective series of 95 consecutive patients (30 with inflammatory bowel disease) were treated with Biodesign<sup>®</sup> plug in May 2006 – October 2009. All patients were preoperatively assessed by physical examination and 3D endoanal ultrasound, and treated with a loose seton. The patients were assessed by physical examination and 3D endoanal ultrasound at 2 weeks, 3 months, and 6 to 12 months after surgery. Long-term follow-up was carried out using a questionnaire, and, when indicated, physical examination and 3D endoanal ultrasound.

**Results:** Follow-up was completed for 90 (95%) patients. Healing was noted in 28 (31%) patients (7 IBD) after the first plug operation. 37 patients received a second plug; healing was noted in five patients (1 IBD). 11 patients received three or more plugs; one patient showed healing after the third plug. The overall success rate after one to two plugs was 37% (33/90), and 38% (34/90) after one to five plugs. Median follow-up time was 110 (range 94–138) months.

**Conclusion:** Long-term follow-up of treatment of high trans-sphincteric fistulas with Biodesign<sup>®</sup> anal fistula plug shows overall success rates 31–38%.

## F45

**Impact of office-based surgery for hemorrhoids on clinical outcomes and institutional costs: a prospective controlled study**

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**Aim:** Transanal hemorrhoidal artery ligation with mucopexy (THAL-m) is a treatment option for symptomatic hemorrhoidal disease (HD). Open hemorrhoidectomy (OH) has stood the test of time in terms of radical cure for HD. Both techniques can be performed under local anesthesia. The aim of this study was to determine the impact on postoperative outcome and cost-effectiveness of performing these techniques in ambulatory setting in an Italian academic centre.

**Method:** A prospective series of grade II /III HD. 100 consecutive patients undergoing ambulatory surgical treatment of hemorrhoids in 2015–2017 (group A) were compared to 100 patients operated at the same institution in the same period (Group H) by hospitalization. The primary outcome was sick leave used as a proxy of clinical outcome. Secondary outcomes included postoperative complications, cost-effectiveness, and patient satisfaction.

**Results:** Sick leave was significantly reduced in Group A patients (8 days versus 15) with no increase in postoperative complications, and patient satisfaction was high. Total mean direct costs per patient were significantly lower in office-based setting versus the hospital stay group (431 euros versus 1320).

**Conclusion:** Implementing ambulatory surgery for hemorrhoids is feasible, efficient, safe, and cost-effective but correct selection of patients is necessary.