EDITORIAL

Thrombosed External Haemorrhoids: A Clinician's Dilemma

Haemorrhoids are highly vascular submucosal cushions that underlie the distal rectal mucosa and contribute approximately 15-20% of the resting anal pressure, ensuring complete closure of the anal canal [1].

Apart from the well-known chronic disturbances (prolapse, bleeding, and, pruritus), they can have an acute painful appearance, which debilitates condition with an economic and social impact due to longer duration, high cost of treatments and reduction in the quality of life. This complication, common in young adult patients with no gender differences and known as thrombosed external haemorrhoids (TEH), can involve both the external and internal haemorrhoidal plexuses, being the first more frequently affected [2-4].

Classically, in all patients with TEH, a certain degree of hypertonicity of the internal anal sphincter may trap the haemorrhoidal mass outside the anus leading to strangulation, necrosis, and gangrene. Diagnosis is clinical and simple in a patient with acutely intense pain and a visible perianal/anal lump. Anyhow, the severity of symptoms depends on the size of the thrombus.

The history can identify an episode of intense straining from lifting, or prolonged sitting due to travelling, or pregnancy. Furthermore, bleeding is infrequent because the thrombus usually does not perforate the anal skin and at an advanced stage, pruritus ani may develop when protrusion of the haemorrhoidal mass allows seepage of rectal contents through the anal sphincters leading to irritation and inflammation of the sensate squamous epithelium below the dentate line.

Over the decades, several medical and surgical treatments have been offered to patients considering the timing of presentation as the most important discriminant. In fact, if diagnosed within 72 hours of onset, evacuation of the clot under local anesthetic or surgical excision is recommended.

Otherwise, if diagnosed beyond 72 hours, treatment is conservative with pain and swelling resolving in the following 7 days with a complete disappearance of the thrombus in two to three weeks by resorption.

In our opinion, clinical practice should be based not only on time from the onset of symptoms but also on evaluating the severity of the symptoms and patient's needs, taking into account that the one who previously had a TEH, is more likely to be treated surgically.

However, one of the main problems is the patients' embarrassment and fear of surgery that often bring to prefer the endurance of symptoms to a face-to-face with the coloproctologist and this is probably the main reason for choosing a medical treatment rather than surgical treatment.

In a retrospective study, comparing the outcomes [5] of conservative and surgical treatment in 231 patients with TEH, 51.5 % of the patients were treated conservatively and 48.5% were treated surgically, with a follow-up that ranged from 7 months to 7 years, the recurrence rate was 4 times higher in the conservative group (25.4% *vs.* 6.3%).

Interestingly, the authors did not use nifedipine or glyceryl trinitrate (GTN) ointment in the conservative group.

In particular, nifedipine is a calcium channel antagonist that acts by inhibiting the flow of Ca^{2+} into the sarcoplasm of the smooth muscle, promoting sphincter relaxation.

In fact, in the anal pain, the primary presenting symptom in over 90% of patients, the decrease of the internal anal sphincter spasm could reduce the time to achieve pain relief if used in combination with topical analgesia [6].

Perrotti *et al.* [7] in a randomized controlled trial compared the use of 0.3% topical nifedipine plus 1.5 % lidocaine ointment with 1.5 % lidocaine alone for TEH demonstrated a total remission of pain and swelling in 92% of the patients in the Nifedipine group versus 46% of controls at 2 weeks.

These results were consistent with a randomized controlled trial published by the same authors [8].

Differently from nifedipine, GTN is a nitric oxide donor which contributes to internal anal sphincter relaxation *via* a non-adrenergic non-cholinergic pathway and its short- and long-term efficacy varies depending on the dose and the site of application used, the duration of treatment, the definition of "chronicity", and the method used to evaluate the extent of fissure healing.

Cavcic *et al*. [9] conducted a prospective study randomizing 150 patients into three treatment groups: topical 0.2% GTN; incision and evacuation of the thrombus; excision of the involved pile. Excision hemorrhoidectomy has been the most effective in reducing pain [evaluated by a traditional Visual Analogue Scale (VAS) scoring system], followed by topical GTN and incision (VAS 20; 10; 0). There were no significative differences at 1-month follow-up but the recurrence rate at 1-year follow-up was greater in the GTN group compared with excision and incision (5%; 7.1%; 21%).

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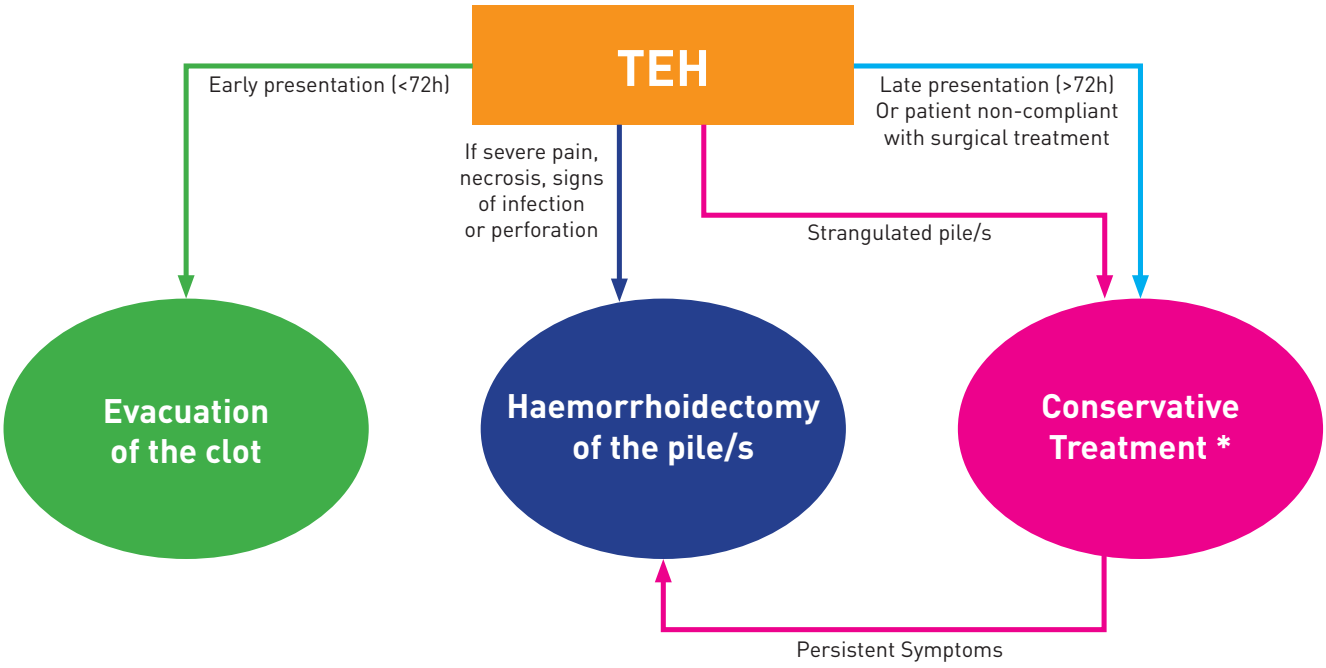
The increase of oral fluid and fiber intake to avoid the shearing action of passing hard stool and excessive straining, is very important and we agree with Lohsiriwat about the beneficial role of lifestyle and dietary modifications in all stages of the haemorrhoidal disease [10].

For this reason, in our clinical practice, we adopt as conservative treatment (Fig. **1**) a combination of local hygiene measures, stool softeners, increased oral intake of fluid, oral and topical analgesics, mesoglycan and local nifedipine or GTN, in case of ineffectiveness of nifedipine according to a recent systematic review published by Nelson and colleagues [11] demonstrating a greater effectiveness of calcium channel blockers even if with a low quality of evidence. Antibiotics are not required.



* Conservative Treatment:
• Increased oral fluid intake
• Local hygiene measures
• Stool softeners
• Oral dose of ketorolac tromethamine of 10 mg every 4–6 hours, not exceeding 40 mg per day
• 0.3% Nifedipine + 1.5% Lidocaine (every 8 hours for 6 weeks) or 0.4% GTN (twice-daily for 6 weeks)
• Mesoglycan (Prisma® 30 mg 2 vials i.m./day for the first 10 days and then 50 mg 1 oral tablet twice/day for further 30 days, Mediolanum Farmaceutici, Milan, Italy)

Fig. (1). Algorithm for the management of TEH.

In our recent study, the use of mesoglycan, a polysaccharide complex rich in sulphur radicals dermatan sulfate, heparan sulfate, electrophoretically slow-moving heparin, and minimal quantities of chondroitin sulfate causes a good pain control after excisional open hemorrhoidectomy and we strongly believe that its antithrombotic and profibrinolytic properties can be very useful in cases of TEH [12-14].

Lastly, even if excisional surgery may lead to a faster improvement of the presenting symptoms and a reduced recurrence rate, prospective comparative randomized trials are needed.

Only a careful selection of patients, based on the severity and onset of the symptoms as on the patient choice can bring the best treatment for any individual case.

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