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Opinion Article

Individualized Treatmet and Suitable Management of Patients with Anal Fistulas

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The management of anal fistulas still remains a difficult task in which accurate diagnosis guides surgical therapy. Last year's new fistula-in-ano classification systems were published to complement those already implemented in clinical practice [1,2]. Such systems classify anal fistulas in 4-5 main grades of complexity, however, differences in risk factors for recurrence and etiology add another layer of complexity in fistula classification warranting further subdivision depending on local anal conditions. The observed grade of complexity is strongly related with surgical outcomes, mainly regarding healing rates and secondarily regarding the possibility for the development of incontinence.

On the other hand new minimally invasive techniques such as laser therapy, video assisted anal fistula treatment [3], over the scope clip (OTSC) closure of the internal opening of the fistulous track [4], and novel surgical techniques as TROPIS (Transanal opening of intersphincteric space) [5] have surfaced in recent literature and are associated with excellent surgical outcomes even though their integration in clinical practice guidelines has not as yet been completed. Laser therapy following 30 years of use in routine clinical practice, only recently gained a position in the guidelines of the American Society of Colon and Rectal Surgeons (ASCRS) in 2022 [6], with new emerging data regarding optimal patient selection rendering the method even more attractive for surgeons [7]. Other new techniques such as stem cell therapy find application in severe and refractory fistulizing anal Crohn's disease [8], however cost and logistics issues preclude their widespread use. Other surgical techniques, like Rectal Advancement Flaps (the oldest in use) and Ligation of Intersphincteric Fistula Tract (LIFT, a newer technique) [9] are associated with high healing rates; the former loses in popularity due to high postoperative continence impairment and is supplanted by newest sphincter saving procedures, the latter became very popular during the last 15 years, as it is safe, easily performed in most cases without significant cost.

The correct delineation of an anal fistula is not often easy, and it is based in a exhaustive physical examination and proctoscopy of the anorectal canal, complemented by imaging data obtained by Magnetic Resonance Imaging (MRI) and Transrectal Ultrasound (TRUS). Before the decision making for the surgical procedure of the anal fistula treatment, the examination under anesthesia of the anorectal canal is an important diagnostic tool of the anal surgeon. The preoperative MRI of the anorectal canal with fistula protocol, from the start of the method [10] has significant implications in patient management and remains to date the gold standard examination, mandated in all complex fistulas and with significant information for a correct classification in cases of simple fistulas; numerous information should be obtained regarding the characteristics of the fistula as the length, the route, the participation of sphincter system in fistula formation, the location of the internal and the external opening. Indeed all anal and perianal anatomic areas should be viewed as supraphincteric and supralevator space, a meticulous study of the ischioanal and ischiorectal fossa and the presence or not of risk factors for recurrence as abscess cavities and secondary tracks should be detected and treated during surgery. After the correct classification of anal fistulas, the majority is simple or complex transphicteric fistulas. Fistulas with high grade of complexity, as those supralevator or translevator fortunately represent a small

minority and they present a more difficult surgical management. Collaboration between radiologists with surgical knowledge of the disease and surgeons with radiologic concept in MRI of the perineum gives optimal results in a correct classification of the anal fistulas and further surgical management.

Surgery has to achieve multiple goals and may addressed to the therapy of the main fistulous track, to treat any risk factor for recurrence as secondary tracks and abscesses cavities, to respect the anatomy of anorectal canal avoiding postoperative continence problems(using sphincter saving procedures), and finally to assure a safe closure at the level of the internal opening. Most sphincter saving techniques are repeatable in case of recurrence and the use of two different procedures is not excluded due to potential synergic effect. The heterogeneity in patient's characteristics (grade of complexity), etiology and the large number of surgical procedures in use means that every patient should receive an individualized therapy; some critical points should be mentioned in order to obtain the best results in surgery.

The most crucial decision of surgeons is whether to perform a fistulotomy or a sphincter saving procedure; fistulotomy probably is the most common operation, as simple fistulas account 30-50% or any more of all anal fistulas. Fistulotomy bears the highest healing rates >95% from any surgical procedure and this benefit should be retracted from the possible risk of postoperative continence problems; this risk is strongly dependent on the amount of the external sphincter fibers divided during fistulotomy (simple low transphincteric anal fistulas): this amount should be <25% [11] of the external sphincter fibers and this estimation is an approximate estimation using MRI data or in examination under anesthesia(a step before surgery), as there is not a clear demarkation for the end of the external anal sphincter and its continuation upwards with levator ani sphincter. Fistulotomy is the only acceptable cutting sphincter procedure and a safe fistulotomy is when addressed in simple linear intersphincteric fistulas or low transphincteric with small amounts of the external anal sphincter. The selection of patients many times is not easy and if remains the dilemma fistulotomy or another sphincter saving technique, it's better to proceed in a suitable sphincter saving technique (eg. Laser therapy or LIFT, not VAAFT), which presents excellent and high healing rates similar those of fistulotomy, due to the low grade of complexity of the anal fistula. Finally simple fistulas are not so simple and patients should be selected well for a safe fistulotomy. Fistulotomy presents in literature a 20% postoperative impairment continence, transient or permanent, with minor or more severe symptoms and probably this percentage is inacceptable for a benign anal disease, low complexity grade of the fistula, obviously in a middle age patient and in the presence of many sphincter saving procedures, where their use in complex fistulas does not exclude the use in simple anal fistulas.

In complex anal fistulas there are many options treatments but only sphincter saving procedures. The opinion and experience of the surgeon and the available technology determine the final procedure; our « freedom» in decision making is «limited» by sphincter saving procedures as LIFT, Laser therapy, VAAFT, OTSC and the newest technique of TROPIS. Rectal advancement flaps are not excluded as alone or in combination with another sphincter saving technique assure a safe closure at the level of the internal opening and mainly when there are insecure local conditions for a safe closure of the internal opening, despite the minor(some times and more severe) postoperative incontinence problems. The non-invasive character of these procedures makes them suitable in anal Crohn's disease where the medical agents [12] play a significant role in the eventual remission of the disease. In selected patients with fistulizing anal Crohn disease, stem cells therapy is an expensive option treatment and probably a step before proctectomy and permanent colostomy.

A safe closure of the internal opening of the fistulous track is a crucial point for the treatment of anal fistulas. This concept dominates in literature last decades and there are several ways to achieve this goal; sutures, semicircular staplers, LIFT, laser, VAAFT, OTSC and Rectal advancement flaps may be used without any guidelines for the best procedure; surgeon should estimate the local conditions around the internal opening (sclerosis, fibrosis, previous surgery, size of the opening) and choose a suitable and safe procedure for the closure. This concept is under a new consideration at the present times; the newest surgical procedure of TROPIS recommends a lay-open technique at the level of the internal opening and intersphincteric space. This operation has excellent short and long term outcomes and it is suitable in high grade complex fistulas as supralevator ones. Unfortunately the method is to new and more studies are needed to find its position in current surgical practice.

This opinion article proposes an individualized treatment for each patient with anal fistula. Fistulotomy is the main operation in well selected patients with simple anal fistulas. In complex fistulas emphasizes the use of minimally invasive techniques and other sphincter saving procedures as LIFT; as the current literature runs rapidly, these procedures present excellent outcomes in selected patients, with healing rates between 70-90%, without to dispose any significant position in guidelines at the moment, and it seems that will be the procedures of choice next years. LIFT with many variations, despite it is a new surgical procedure gained in a short period of time popularity as it is safe, sphincter saving procedure and cheap. The newest technique of TROPIS is under evaluation as well as the most minimally invasive procedures.

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