

SUPRALEVATOR ABSCESS – CLINIC, DIAGNOSIS AND TREATMENT

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ABSTRACT

INTRODUCTION: The supralelevator abscess, though uncommon, is a significant issue in the emergent colorectal surgery, due to its atypical symptoms, surgical tactics and frequent postoperative failure.

AIM: The aim of this article is to analyze the frequency, the diagnostic difficulties and the clinical features by improving the results of their treatment through the timely diagnosis and rational surgical tactics.

MATERIALS AND METHODS: For a period of 15 years, from 2004 to 2018, a retrospective analysis of 845 urgently admitted patients, with an acute anorectal abscess (ARA) was done. Depending on the localization, we established four types of ARA: perianal – 392 patients (46.39%), ischiorectal – 287 patients (33.96%), intersphincteric – 93 patients (11.01%), and supralelevator – 73 patients (8.64%). Superficial localization was determined in 450 patients (53,25%) and deep - in 395 (46.75%). Males were 53 (72.60%) and females were 20 (27.40%), with a ratio of 2.65:1. The age of the patients varied between 17 to 85 years old, with an average age of 51.27 8.43 years. The following operations were performed: single surgery in 39 patients (53.42%) - two incisions, revision, necrectomy, lavage and drainage №2, and in 34 reoperated patients (46.58%) – re-incisions, revision, necrectomy and redrainage.

RESULTS: In all of the cases the early signs of a supralelevator abscess were atypical, therefore timely diagnosis was exceptionally rare. After the formation of the purulent collection, an inflammatory intoxication syndrome with manifestations of sepsis was determined. The main diagnostic methods in patients with supralelevator abscess were digital rectal examination, rectoscopy, anoscopy, transrectal ultrasound, CT and MRI of the pelvis. During the operation in 25 patients (34.25%) with supralelevator abscess, a rubber seton ligature was placed through the internal opening for gradual tightening of the sphincter. There were no patients with a lethal outcome.

CONCLUSION: The variety and atypical presentation of the supralelevator abscess makes the diagnosis difficult, which may lead to delays of hospital admission and operative treatment. The timely and adequate removal of the purulent necrotic structures requires total necrectomy until full mechanical eradication, followed by daily control and proper follow-up of the postoperative period.

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INTRODUCTION

A supralelevator abscess (SLA) is the most complex variant of deep anorectal abscesses, which causes frequent difficulties in diagnosis and operative treatment (1). According to the conventional cryptoglandular theory of the anorectal abscess, the basic trigger mechanism is the initial obstruction in the anal glands, resulting in stasis and inflammation in the intersphincteric space, which subsequently affects the surrounding areas. The disease is relatively rare, being an important and essential problem in urgent coloproctology due to the non-specific symptoms, the controversial surgical treatment tactics and the irregularities associated with postoperative disabilities (2). The reason for this are the anatomical and topographic features in the small pelvis and the pararectal tissues due to the deep location of the SLA, which prevents the early diagnosis of symptoms and the timely surgical intervention (3).

AIM

The aim of this article is to analyze the frequency, the diagnostic difficulties and the clinical features by improving the results of their treatment through the timely diagnosis and rational surgical tactics.

MATERIALS AND METHODS

For a period of 15 years (2004-2018), we performed a retrospective analysis of 845 emergency and operative patients treated with an acute anorectal abscess. According to their clinical location, they were divided as follows: perianal - 392 (46.39%), ischio-rectal - 287 (33.96%), intersphincteric - 93 (11.01%) and SLA - in 73 patients (8.64%). Superficial anorectal abscesses were found in 450 patients (53.25%) and 395 (46.75%) with deep localization. Based on gender SLA patients were divided as follows: men were 53 (72.60%) and women - 20 (27.40%) at a ratio of 2.65: 1. The age of the patients ranged from 17 to 85 years, with an average age of 51.27 ± 8.43 years. The distribution of patients by age group was as follows: up to 20 years - 1, from 21 to 30 years - 10, from 31 to 40 years - 10, from 41 to 50 years - 13, from 51 to 60 years - 17, from 61 to 70 years - 13, from 71 to 80 years - 7, and over 80 years - 2. Clinical symptoms, diagnostic difficulties, elapsed time from onset of the disease, and surgical treatment performed have been investigated. The following types of surgical in-

terventions were applied: single surgery with two incisions, revision, necrectomy, lavage, drainage № 2 - performed in 39 patients (53.42%) and the reoperated patients with reexcision, revision, necrectomy and re-drainage were 34 - (46.58%). In 25 patients (34.25%) in the SLA surgical treatment group, an elastic seton ligature was placed through the internal opening for gradual tightening of the sphincter. Of these, primary ligation was administered to 20 patients (80%), and the remaining 5 patients (20%) had ligation in subsequent revision due to purulent secretion.

RESULTS AND DISCUSSION

The onset of SLA is in any case atypical, which explains the late diagnosis. The clinical picture in the first days is non-specific, predominantly with signs of discomfort and general inflammatory response: weakness, fatigue, headache, sweating, somnolence and subfebrility. The prevalence of vague and general complaints leads to an inadequate and delayed diagnosis of the disease (4).

Subsequently, after a few days, the first non-specific complaints appear in the pararectal region, leading to misdiagnosis such as proctocolitis, inflamed hemorrhoids, anal fissure, prostatitis, etc. In rare cases, one may observe local changes in the anorectal area - a painless non-pitting edema and mildly elevated local temperature. A major factor behind the delayed diagnosis is the deep localization of this abscess in the small pelvis, its spread being limited by the many surrounding tissues in the vicinity (5). This is the cause of the vague and scarce symptoms, the poor and indefinite onset of the disease, the slow and protracted dynamics of clinical complaints. Only early recurrent SLA patients may be diagnosed on time due to similar complaints in the past. The formed purulent collection begins to grow in the vicinity in the coming days, resulting in a distinct subacute to acute inflammatory intoxication syndrome. In the subsequent evolution of the inflammatory process, migration occurs, leading most often to the occurrence of thick infiltration around the colon or slightly noticeable edema in the anorectal region, which is also the first visible local sign. All of this leads to a progressive worsening of clinical symptoms, with septic complaints mostly prevalent. Diagnostic difficulties are due to the lack of or minimal local changes - absence of redness and skin hy-

peremia, with no evidence of swelling, infiltration or fluctuation. In the first 3 days after the onset of the disease 8 patients were admitted (10.96%), those admitted after up to 5 days were 14 (19.18%), by the 7th day - 47 patients (64.38%) and up to 9 days - 4 patients (5.48%). Different variability in clinical symptomatology and manifestation was found, depending on the duration of the purulent necrotic inflammation. The assessment of the time span until the hospitalization revealed that the longer it was, the more general and local manifestations were pronounced and expressed.

The clinical course of SLA is directly related to the duration of the disease and the delayed hospitalization periods, with signs of septic status and general intoxication, such as endotoxemia, haemodynamic disturbances, organ dysfunction, hypotension, tachycardia and oliguria (6). In the absence of treatment and a history of septic status, a spontaneous breakthrough in the rectal lumen can occur. The disease is complicated and much more severe in patients with concomitant illnesses, such as diabetes mellitus, decreased immunity and other chronic pathologies. The primary diagnostic tool for SLA is the digital rectal examination, where the tissue around the rectum is assessed and the inflammatory infiltrate can be felt. It should be kept in mind that in nearly two thirds of the cases, only the lower limit of the abscess is palpated. In men, the pathognomonic signs are: unclear pains with the occurrence of dysuria and especially difficulty in urinating. Data on urine retention were found in 13 of our patients (17.81%). In patients with unclear diagnosis rectoscopy, anoscopy, transrectal ultrasonography, CT and MRI of the pelvic floor have a decisive role in the diagnosis (7, 8, 9). In all cases, SLA requires an accurate assessment of its type, volume and number of surgical interventions, taking into account localization and abscess size, local changes, pararectal tissue distribution, and ratio to anal sphincter (10, 11).

All patients were operated on under urgent conditions, under general anesthesia and without special preparation of the colon. The systematization of causes and risk factors in SLA for its severe clinical course allows the development of tactical and technical parameters for timely and radical surgical intervention (12). The guiding principles for adequate surgical treatment of SLA are:

- ◆ Total and complete opening of the purulent cavities
- ◆ Thorough digital revision with complete cleansing of all purulent necrotic structures
- ◆ Assiduous rinsing with antiseptic solutions
- ◆ Elimination, if possible, of the internal opening through rubber seton ligation (13)
- ◆ Adequate and correct placement of 2 drains
- ◆ Specific daily local control and optimal treatment in the postoperative period

It should be noted that local changes in patients with delayed hospitalization, diabetes mellitus and compromised immunity are much more diffuse and characterized by greater lesions. In these patients with SLA, a complete radical approach is imperative for the removal of the purulent necrotic structures with necrectomy, taking into account the anatomical topographic data of the sphincter apparatus and aiming at as non-traumatic operation as possible. A wide and sufficient incision with elliptical excision of the skin wound edges is required, a thorough digital revision of the abscess cavity with complete cleavage and removal of necrotic tissues. Very often, non-observance of these principles leads to a non-radical and limited operative intervention, with one or more reoperations (13, 14). Also in the presence of a diffuse phlegmonous process, necrotic fasciitis and especially anaerobic SLA, it is necessary to perform several new surgical interventions. In our reoperated patients, repeated surgical intervention was used in 17 (23.29%), surgical intervention was conducted in 12 (16.44%) for the third time and for the fourth time or more - in 5 patients (6.85%). A total of 34 patients (46.58%) had to have reoperations. It is very important to have a proper and correct postoperative period, and the effectiveness of the operative treatment in SLA is determined by the precise assessment of a number of criteria such as the general condition of the patient (fever, persistent intoxication, painful syndrome), local status data (edema, redness, infiltrate, persistent purulent secretion, necrotic tissue), and blood test results (leukocytes, CRP, etc.). Technical and tactical surgical negligence is due to underestimation of local inflammatory changes and unqualified interventions, leading to non-radical and partial necrectomy with ongoing purulent secretion and septic condition. Continuous and thorough post-

operative wound monitoring is required for timely intervention in the presence of purulent necrotic outbreaks. In all SLA patients, rational antibacterial therapy is mandatory while complex resuscitation and detox therapy is performed in parallel. Analgesic medications are particularly needed in the early postoperative period. The diet is unrestricted, encouraging early defecation. We had no patients with lethal outcome.

CONCLUSION

The versatile and often atypical manifestations of SLA create diagnostic difficulties that may lead to a delay in clinical diagnosis, hospitalization and operative treatment. Only early and timely diagnosis leads to a well-timed and optimal surgical treatment with elimination of the purulent inflammatory process. There is always an individualized therapeutic approach based on the severity, prevalence and localization that determines the type and volume of surgery. It must be urgent and radical, regardless of the severity of the patient's clinical condition (15). The timely and adequate elimination of the purulent necrotic and non-viable structures requires total full-scale necrectomy for their mechanical eradication, followed by a thorough daily control of the purulent area (16, 17). In the postoperative period it is very important to accurately assess the general and local conditions in the operated patient with SLA, and it is important to take into account and correct any changes that have occurred. Insufficient knowledge and practical inexperience of general surgeons performing only incision and drainage is often followed by recurrence and appearance of a fistula. Delayed repeated or subsequent surgical intervention also results in the formation of new purulent necrotic areas and the occurrence of a septic condition. Surgical procedures for SLA require adequate and radical surgical interventions, performed in surgical units specializing in coloproctology.

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