

Diagnosics and operative treatment of retrorectal cysts – description of five cases

Małgorzata Kołodziejczak¹, Maciej Grochowicz¹, Iwona Sudol-Szopińska², Anna Kosim¹, Robert Stefański¹

¹Proctology, Sub-Department of General Surgery, City Traumatic Hospital, Warsaw, Poland

²Central Institute for Labour Protection – National Research Institute, Warsaw and Department of Imaging Diagnostics, Second Faculty, Medical School, Warsaw, Poland

Background. Retrorectal cysts (RC) are unusual lesions. Publications on RC are very rare and describe a few cases at most.

Methods. Authors describe five patients with RC. The diagnostics of RC was based on the medical history of the patients and the basic diagnostic investigation was trans rectal ultrasonography. An operation to remove the cysts from perineal access was the treatment administered in these cases.

Results. In three cases the histopathological examination showed cystis epidermalis. In another case a cyst epithelialized with ciliated epithelium was found. In the last case bone tissue, fatty tissue and fibrous tissue were depicted, all in the state of chronic inflammation.

Conclusions. Per rectum digital exam is the basic examination decisive in making the diagnosis. TRUS should be employed as the diagnostic investigation in order to estimate precisely the size of a cyst and its proportion to the rectum wall. Retrorectal cystectomy in perineal access is an effective method of treatment of this disease. This article, likewise other research works, describes a small group of patients, therefore, its conclusions should be treated as preliminary ones.

Key words: rectal disease-ultrasonography-surgery; cysts

Introduction

Retrorectal cysts (RC) are unusual lesions. The majority of publications on this subject concerns a few cases at most or describe one

casuistic patient.¹⁻⁵ In majority of cases (75%) the cysts are congenitally inborn.⁶

There are many classifications of retrorectal cysts and tumours. They are mostly based on a histopathological structure of the cysts which is connected with the embryonic development of these lesions. Levelady's and Deckerty's classification is the most frequent one and covers the following changes: dermoidal cysts, chordomas, myelomenin-gocele hernias, cysts on retrorectal intestine and other tumours, among them leiomyomas, neuromas and sarcomas.

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Correspondence to: Iwona Sudol-Szopińska, MD PhD, CIOP-PIB, ul. Czerniakowska 16, 00-701 Warszawa, Poland; E-mail: iwsud@ciop.pl

Dermoidal cysts are lined with stratified squamous epithelium and contain skin appendages. They are filled with liquid or greasy contents whereas chordomas are filled with thick jelly-like contents. Due to direct anastomosis with sacral and coccygeal bones chordomas cause deterioration of these osseous structures and, when growing, they can exert pressure on nervous trunks. Cysts on retrorectal intestine are mainly teratomas. In majority of the cases they contain histologically mature tissues i.e. elements of the skin and their appendages, teeth or osseous fragments. They occur more often in women.

Cysts are mainly of a mild character. However, they can be hormonally active^{3,4} and can also undergo a malignant transformation. Dermoidal cysts turn malignant in 10-15% of the cases. A malignant transformation of chordomas occurs in 10% of the cases and a similar transformation of teratomas occurs in 10–20% of the cases.

Retrorectal cysts can be positioned differently and they can grow to different sizes. In a few cases of newborns with congenitally in-born cysts retrorectal tumours are placed behind pelvis minor⁷ but they relocate and exert pressure on rectum. In adults RC are mainly positioned between the rectum and the sacral bone. The cysts can cause anal pain and sensation of tenesmus. They can suppurate. It may occur that patients suffering from such ailments are diagnosed with coccygodynia and they undergo a long-term ambulatory treatment with analgesics, steroid and non-steroid anti-inflammatory drugs. Per rectum the examination plays the decisive role in diagnosis of RC. It reveals tense tender resistance on the posterior wall of the rectum. It is sometimes difficult to differentiate between a cyst and a high extra levator abscess; the diagnosis depends on clinical symptoms. In many patients, who are diagnosed with retrorectal cysts, rectoscopy is an effective solution. Transrectal ultrasonography (TRUS) is an investigation which confirms the diagno-

sis and allows determining precisely the size of a cyst and its relation to the rectum wall.¹ Endosonography determines - to a certain point - whether the lesion merely models the rectum wall or infiltrates it. Transperineal ultrasound is an additional supplementing diagnostic investigation which together with TRUS gives a full picture of the lesion.

In the following article the authors present cases of five female patients who have been treated for retrorectal cysts and describe the diagnostics as well as the treatment of these patients.

Methods

Patients

Five female patients from 36 to 55 years of age (the average 44 years) were operated on between 1 January 2001 and 30 June 2004 in Proctology Department of City Hospital at Solec (Table 1).

Diagnostics

The diagnostics of RC was based on the medical history of the patients. They all notified of severe pain and sensation of tenesmus which were growing in a sitting position. As the result of per rectum investigation elastic tender resistance of a different size was found and it was protruding from the posterior wall of rectum. The rectoscopic picture showed that the mucous membrane of rectum was unchanged. TRUS was the basic diagnostic investigation (Figures 1a, 1b).

Therapy

An operation to remove the cysts from perineal access was the treatment administered in these cases. The patients were placed on their side with legs pulled up. The incision was made between the anus and the coccygeal bone. In three cases it was necessary to perform a resection of the coccygeal bone. The wound was drained using Redon's method.



Figures 1a, 1b. Retrorectal cyst presented with transperineal and transrectal ultrasonography.

The material was sent for histopathological examination. In all these cases there were no complications in postoperative course.

Results

In three cases the histopathological examination showed cystis epidermalis. Its wall was formed with fibrous tissue epithelialized with cornifying stratified squamous epithelium. In another case a cyst epithelialized with ciliated epithelium was found. In the last case the result depicted bone tissue, fatty tissue and fi-

brous tissue, all in the state of chronic inflammation.

The patients had regular check-ups at Proctologic Hospital Clinic. In four cases the ailments subsided completely. One patient still suffers from ailments of different intensification. She also has degenerative changes in lumbosacral segment of vertebral column.

Discussion

In the presented material of all cases full compatibility between preoperative diagnostics

Table 1. Characteristics of patients with retrorectal cysts and their treatment

Age	Under 30 years old	0	0
	30 – 40 years old	2	40%
	over 40 years old	3	60%
Sex	Male	0	0
	Female	5	100%
Duration of symptoms	< 3 months	1	20%
	3 – 6 months	0	0
	6 – 12 months	1	20%
	> 12 months	3	60%
Type of surgical procedure	Cystectomy	2	40%
	Cystectomy combined with resection of the coccygeal bone	3	60%
Compatibility between surgery and transrectal ultrasonography	Compatible	5	100%
	Non-compatible	0	0
Position in relation to the rectum wall	Intramural	2	40%
	Adjacent to the rectum wall	3	60%

and surgical evaluation of the lesion was found.

In spite of an apparent easiness in the diagnostics of this disease, it often happens that patients have been treated with an ineffective method for many months before they finally receive professional help. The most probable reason for such a situation is the rarity of retrorectal cysts occurrence and physicians' lack of experience in their diagnostics.

Singer *et al* describe seven patients who suffered from ailment caused by RC but who were wrongly diagnosed with, for example, anal fistula, pilonidal cyst, anorectal abscess, psychiatric disease, pain after an injury, post partum pain or proctalgia fugax. They conclude that the best diagnostic investigation is an accurate per rectum examination supplemented with the computer tomography.⁸

There are investigators who recommend the use of magnetic resonance in RC diagnostics.⁹ However, it is well known that this investigation is expensive and less available than the ultrasound scan.

Due to the risk of malignant transformation, suppuration and pressure symptoms, RCs should be removed in an operation in perineal or abdominal access.

Many investigators describe cystectomy combined with the resection of the coccygeal bone as a good operative method.² If the cyst is closely bound to the caudal bone, it has to be removed together with the fragment of the bone as it is the point where the cyst grows from. Leaving it behind may cause the regrowth of the cyst (local malignancy). There are cases that laparotomy ensures more accurate evaluation and surgical access.¹ The choice of surgical access depends on the size and location of the cyst, its anatomical position in relation to other organs and the experience of a surgeon. In order to qualify a patient for laparotomy it is advisable to supplement the preoperative diagnostics with CT of pelvis and abdominal cavity.

Conclusions

1. Per rectum digital exam is the basic examination decisive in making the diagnosis.
2. TRUS should be employed as the diagnostic investigation in order to estimate precisely the size of a cyst and its proportion to the rectum wall.
3. Retrorectal cystectomy in perineal access is an effective method of treatment of this disease.
4. This article, likewise other research works, describes a small group of patients, therefore its conclusions should be treated as preliminary ones.

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