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Case Report

Infected Rectal Duplication Cyst and Sacral Meningomyelocele

Kyle G. Cologne and Adrian E. Ortega*

Division of Colorectal Surgery, Keck School of Medicine at University of Southern California, USA

***Corresponding author**

Adrian E. Ortega, Division of Colorectal Surgery, Keck School of Medicine at the University of Southern California, LAC+USC Medical Center, Clinic Tower, Room 6A2231-A,1200 N. State Street, Los Angeles, CA 90033, USA, Tel: (323)-409-7846; Fax: (323)-441-7296; Email: sccowboy78@gmail.com

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Abstract

This report presents a case of a combined infected rectal duplication cyst (RDC) associated incidentally with a meningomyelocele in and adult female documented with sagittal magnetic resonance imaging (MRI). A comprehensive differential diagnosis is presented. Surgical excision is recommended to prevent malignant degeneration of the RDC.

CASE PRESENTATION

An 18 year-old female presented with perianal pain and fever. Clinical evaluation revealed a fluctuant presacral cystic mass on digital exam without obvious external or cutaneous abnormalities. A concurrent meningomyeloceleis seen posterior to this cyst in sagittal perspective on magnetic resonance imaging (Figure 1). She underwent a definitive surgical procedure including unroofing of the duplication cyst and excision of there maining mucosal lining. Care was taken not to violate the more posteriorly located meningomyelocele and risk serious infection. Postoperatively she had complete resolution of her symptoms and regained normal bowel function.

A meningomyelocele (M) is seen associated with sacral agenesis. The latter is characteristic of meningomyelocele but is also common with other presacral pathologies [1].

DISCUSSION

Meningomyelocele is a rare congenital malformation that communicates with the dural sac. Varying degrees of sacral agenesis are characteristic. Rectal duplication cysts are also rare and often asymptomatic unless an infection occurs. An infected rectal duplication cyst must be distinguished from a crypto glandular supralevator infection. The former requires complete excision while the latter requires incision and drainage based on a recently described classification and treatment algorithm [2].

Both meningomyeloceles and rectal duplication cysts are important but relatively uncommon within the differential diagnosis (δDx) of presacral masses (Table 1). Lists the δDx of presacral cysts, masses and miscellaneous conditions, which require consideration. Both computed tomography and magnetic resonance imaging are useful in evaluation. Biopsy or aspiration is generally contraindicated. The most frequent causes are dermoid cysts and teratomas. Rectal duplication cysts, presacral dermoid cysts and teratomas all have the potential capacity for malignant degeneration [3-5]. Therefore, complete surgical

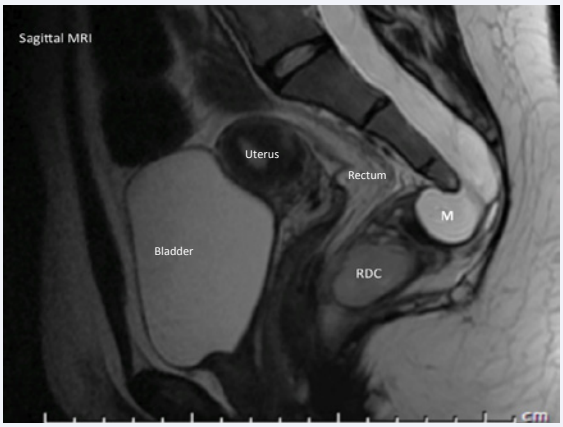

Figure 1 Mid-sagittal MRI demonstrates the rectal duplication cyst posterior to the rectum (RDC).

Table 1: A comprehensive list of conditions presenting as a posterior extramural rectal mass [6-10], *Pilonidal disease may mimic a presacral cyst or supralevator abscess when associated with sacral agenesis.

δdx Pre-Sacral Cysts And Masses	
Dermoid Cyst	Echinococcal Cyst
Teratoma	Ganglioneuroma
Meningomyelocele	Hemangioendothelioma
Rectal Duplication Cyst	Hamartoma
Schwannoma	
Neuroenteric Cyst	
Cystic Lymphangioma	Neuroendocrine Carcinoma
Pilonidal Cyst*	Cystic Neuroblastoma
Supralevator Abscess	Cordoma

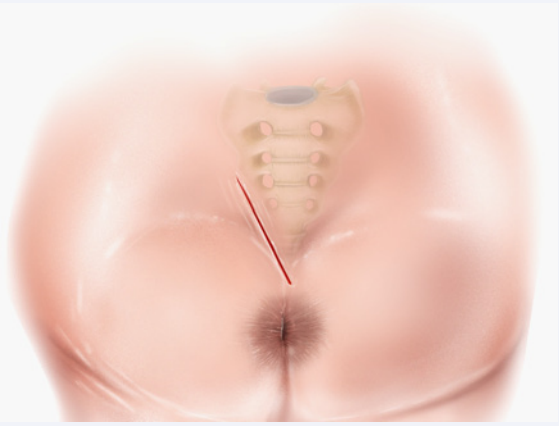

Figure 2 The Kraske approach is illustrated with a para-sacrocoggygeal incision. A midline incision can be substituted in the setting of sacrococcygeal atresia.

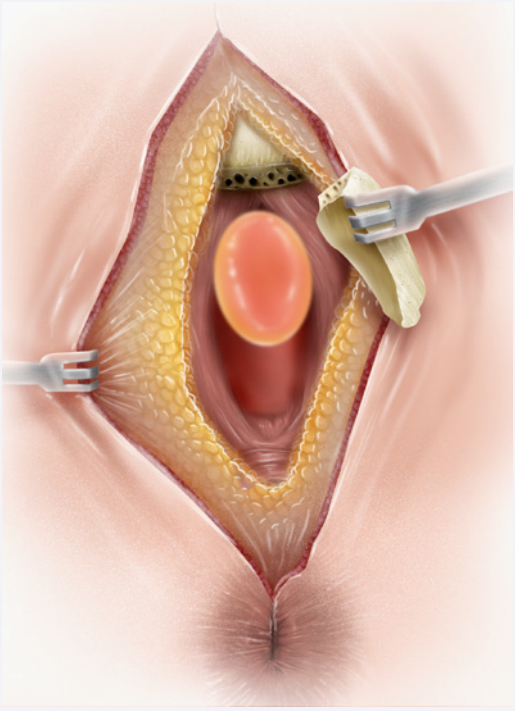

Figure 3 Lesions below the level of S3 are amenable to a posterior para-sacrococcygeal approach. Higher ones may require a combined transacral and abdominal mobilization. Resection of the coccyx is generally advised. (Adapted from Kocher T) [11].

resection is indicated. The treatment of meningomyelocele is far more complex depending on the age and clinical symptomatology of the patient. It is therefore, not addressed herein in a case report where it was an incidental finding associated with an infected rectal duplication cyst.

Surgical approach to presacral cysts

The Kraske approach is well suited for the resection of benign presacral cysts [11]. It consists of a para-sacrococcygeal incision as illustrated in (Figure 2). Disarticulation of the coccyx requires sectioning of its attachments to the pubo- and ileococcygeus muscles bilaterally. The anococcygeal ligament and the articulation between S5 and the coccyx are sectioned. This technique generally provides excellent exposure for lesions below the third sacral vertebra (Figure 3). Care must be taken to integrally enucleate the cyst without violating its lining.

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