Anal Duct/Cyst Presenting With Soft Cystic Perianal Mass

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Received on: February 8, 2017 | Accepted on: February 9, 2017 | Published on: February 27, 2017


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Published by: Scientific Synergy Publishers

Abstract

Purpose:
The purpose of this communication is to report a case of anal duct/gland cyst.

Method:
We report the case of a 42-year-old patient presented with swelling at the perianal region. Per rectal examination a soft cystic mass was felt at the posterior area 3 o’clock to 7 o’clock region of rectum. A computerized tomographic scan demonstrated a horseshoe shaped mass in the perianal region, mainly present on the left side with a small extension on the right side. The tumor was resected en bloc successfully.

Results:
In our case, the tumor proved to be an anal duct/gland cyst.

Conclusion:
Diagnosis of anal duct/gland cyst is based on routine histologic features, histochemical characteristics of mucus, and/or the presence of a communication with an anal duct or crypt. Based on these criteria, some of the reported cases of mucus-secreting cysts occurring around the anorectum may prove to be anal duct/gland in origin.

Introduction

Mesenchymal tumors of the digestive tract are rare and present in variable forms. It is difficult to classify these tumors based on histopathology alone. All the more rare are these tumors in the perianal region. Mesenchymal tumors of the digestive tract are dominated by stromal tumors [1]. These tumors were formerly referred to as leiomyomas, leiomyosarcomas, or schwannomas, due to their spindle cell growth pattern. Recent pathologic analyses have demonstrated, however, that most mesenchymal tumors of the gastrointestinal tract have unique histological, immunophenotypic and molecular genetics features that distinguish them from typical smooth-muscle and neurogenic tumors [1,2]. These tumors lack features of typical smooth-muscle tumors such as actin-containing attachment filaments, positive staining for desmin, and other ultra-structural and immunohistochemical characteristics. These tumors usually express the CD117 antigen [c-kit protein] of the interstitial cells of Cajal, which are the intrinsic pacemaker cells of the gastrointestinal tract, as well as the CD34 antigen expressed by hematopoietic progenitor cells. They consequently may represent tumors of a primitive mesenchymal precursor cell. With the exception of esophageal leiomyoma’s and rare colorectal leiomyoma’s, which possess the pathologic characteristics of true leiomyoma’s, nearly all intramural mesenchymal tumors of the gastrointestinal tract are gastrointestinal stromal tumors [1,2]. However, true leiomyomas are more common in the esophagus, and they have been occasionally noted in the colon and rectum [2].

Out of 10% of gastrointestinal stromal tumors found in the colorectum, [1,2] only 10% of these are found in the anus [3]. Gastrointestinal stromal sarcomas in the anus and rectum account for only 0.07% to 0.1% of malignant tumors in this region [4,5]. The most common presenting symptom is rectal bleeding, followed by rectal pain or fullness. Constipation or a palpable mass may also be present [3,5]. Stromal tumors of the
anorectum are a rare group of mesenchymal tumors that often have a protracted clinical course. Since the discovery of activating KIT mutations in gastrointestinal stromal tumors (GISTs), it has become increasingly important for pathologists to correctly diagnose GISTs and separate them from their potential mimics in the gastrointestinal tract and abdominal cavity. Some mesenchymal tumors, such as leiomyomas of the muscularis mucosae, are easily distinguished from GIST on the basis of their anatomic location and morphologic appearance. Others, such as gastrointestinal schwannomas, can significantly overlap with GIST in their gross appearance and morphology and require a panel of immunostains for correct diagnosis. It is important to separate GISTs from potential mimics because their treatment and prognosis can differ markedly. GISTs have phenotypic similarities with the interstitial cells of Cajal and, therefore, a histogenetic origin from these cells has been suggested. An alternative possibility, origin of pluripotential stem cells, is also possible; this is supported by the same origin of Cajal cells and smooth muscle and by the common SMA expression in GISTs. GISTs differ clinically and pathogenetically from true leiomyosarcomas [very rare in the GI tract] and leiomyomas. The latter occur in the GI tract, predominantly in the esophagus [intramural tumors] and the colon and rectum [muscularis mucosae tumors]. They also differ from schwannomas that are benign S100-positive spindle cell tumors usually presenting in the stomach. GI autonomic nerve tumors [GANTs] are probably a subset of GIST. Other mesenchymal tumors that have to be separated from GISTs include inflammatory myofibroblastic tumors in children, desmoid, and dedifferentiated liposarcoma. Angiosarcomas and metastatic melanomas, both of which are rare, should not be confused with GISTs [5].

The clinical manifestation of GISTs is highly variable. In some patients, small benign GISTs are discovered incidentally during radiologic evaluation or surgery for another condition. In contrast, other patients present with profound symptoms that reflect large or highly aggressive GISTs that invade adjacent organs and metastasize [6].

### Material and Method

A 42-year-old man came to the clinic on January 20th, 2012 presenting with a swelling in the perianal region since last 6 months of duration. He denied pain, discharge or change in the size of swelling since it was first noticed. On per rectal examination a soft cystic mass was revealed in the posterior area 3 o clock to 7 o clock region of rectum. No blood stain was observed on gloves. Magnetic Resonance Imaging [MRI] revealed an 8 cm 5 cm 5 cm low density mass [Figure 1].

A fine needle aspiration cytology [FNAC] showed mucinous in the cystic mass and computed tomography [CT] scan showed a horseshoe shaped mass in the perianal region. The swelling in perianal region was mainly present on the left side with a small extension on the right side.

### Conclusion

The features are those of mesenchymal tumor most in keeping with c-kit negative gastrointestinal tumour of intermediate risk category. In our case, the tumor proved to be an anal duct/gland cyst. Some of the reported cases of presacrococcygeal glandular cysts had histopathologic features suggestive of anal duct/gland origin.

### Discussion

Diagnosis of anal duct/gland cyst is based on routine histologic features, histochemical characteristics of mucus, and/or the presence of a communication with an anal duct or crypt. Based on these criteria, some of the reported cases of mucus-secreting cysts occurring around the anorectum may prove to be anal duct/gland in origin. It was concluded that the cystic mass was an aggressive angiomyxoma which was locally aggressive mesenchymal tumor of unknown etiology usually affecting vulva, vagina, perianal region, buttocks or pelvis. It is considered aggressive because it tends to recur after excision.

### References

The swelling was surgically removed on January 11th, 2012 under general anesthesia. A well encapsulated horse shoe shaped cystic swelling 6cmx6cmx3cm was found at 3 o clock to 7 o clock which was resected en block. It was attached to the surrounding tissue but was precisely excised. Following surgery, no extension was noticed in the surrounding tissue. No other structures were seen. Hemostasis was secured and wound was closed.

Microscopic view of the mass showed fibromuscular tissue with a poorly defined spindle cell tumor. Histopathology of the resected specimen identified that tumor cells had indistinct cell membrane with vesicular nuclei and no significant pleomorphism. However, no mitosis, or necrosis was seen, mast cells were noticed at the background. \[\text{Figure 2}\]. The mitotic index was 30/10 HPF. Immunohistochemical stains demonstrated tumor cells with diffuse positivity with CD34. However no expression with C-kit, S100 and SMA was noticed. Mib -1 labeling index is low [1-2%][\text{Figure 3}].