Article ID: WMC004742 ISSN 2046-1690

Colonic lipoma presented with attack of gastroenteritis: Case report

Peer review status:
Yes

Corresponding Author:
Dr. Salah Raslan,
Senior Registrar Colorectal Surgery, Ain Shams University, Cairo, Egypt and Alhada Armed Forces hospital, Taif, KSA, Taif, KSA - Saudi Arabia

Submitting Author:
Dr. Mohammad Othman,
Consultant Obstetrician and Gynaecologist, King Abdullah Medical City, Maternity and Children Hospital, Madinah, Saudi Arabia, 84 Bradfield Road, M32 9LE - United Kingdom

Other Authors:
Dr. Timothy Nwabunike,
Consultant Colorectal Surgery, Alhada Armed Forces hospital, Taif, KSA, Taif, KSA - Saudi Arabia

Dr. Mohamed Adwani,
Consultant Colorectal Surgery, Alhada Armed Forces hospital, Taif, KSA, Taif, KSA - Saudi Arabia

Dr. Basem Othman,
Minimal Invasive Surgery Consultant, Alhada Armed Forces hospital, Taif, KSA, Taif, KSA - Saudi Arabia

Article ID: WMC004742

Article Type: Case Report

Submitted on:28-Oct-2014, 09:15:00 PM GMT **Published on:** 29-Oct-2014, 03:31:38 PM GMT

Article URL: http://www.webmedcentral.com/article_view/4742

Subject Categories:SURGERY

Keywords: Colonic lipoma, Transverse colonic lipoma, Surgical resection, Colectomy, Frozen section

How to cite the article: Othman M, Raslan S, Nwabunike T, Adwani M, Othman B. Colonic lipoma presented with attack of gastroenteritis: Case report. WebmedCentral SURGERY 2014;5(10):WMC004742

Source(s) of Funding:

None

Competing Interests:

None known

WebmedCentral Peer Reviewed: Yes

Additional Files:

Colonic lipoma presented with attack of gastroenteritis: Case report

Author(s): Othman M, Raslan S, Nwabunike T, Adwani M, Othman B

Abstract

Lipomas are the most common type of non- epithelial benign tumors of the gastrointestinal tract. This is a report of a case of transverse colonic lipoma which presented with a misleading Gastroenteritis for which upper and lower endoscopies were done for recurrent and persistent symptoms and revealed tumor-like mass in the transverse colon for which transverse colectomy with primary anastamosis was done and histopathology came as the rare colonic lipoma. The gastrointestinal lipoma is a relatively rare disease, and originates from the submucosa of the gastrointestinal tract and occurs the most frequently in the cecum and ascending colon. One of the challenges in the management of colonic lipoma is to establish the diagnosis preoperatively. Three diagnostic tools can bring arguments in favor of the diagnosis: colonoscopy, barium enema and CT

Background

Lipomas of the gastrointestinal tract are benign tumors and are the most common type of non? epithelial (mesenchymal) neoplasm of the gastrointestinal tract [1, 2]. They are rare and most often found incidentally during a colonoscopy, computed tomography (CT) scan, surgery, or autopsy [1, 3]. Lipomas are the third most common benign tumor of the colon, following hyperplastic and adenomatous polyps [2]. Lipomas of the colon were first reported by Bauer in 1757 [4, 5]. Lipomas are most often located in the ascending colon (45%), although tumors may occur in the sigmoid colon (30.3%), descending colon (15.2%), and transverse colon (9.1%) [1, 2, 6]. The most common age is the fifth or the sixth decade of life. Female predominance has been reported, but other authors have found no sex predilection [1, 2]. The incidence is estimated about 0.035-4.9% because they are rarely symptomatic unless they reach a certain size. They are mostly solitary, but may be multiple in 6-20% of cases [1, 2, 4]. Most colonic lipomas are asymptomatic and need no treatment [4, 5]. However, about 30% reach 2 cm or larger in size and may produce symptoms. The symptoms occur in about one-fourth of patients with lipomas. Abdominal pain and discomfort change in bowel habits, diarrhea, and rectal bleeding or even melena can be seen [6-8]. They may have serious consequences like life-threatening hemorrhage, intussusception, and intestinal obstruction. Even spontaneous expulsion has been reported [1, 6-8]. In addition, lesions larger than 4 cm may lead to perforation, or gastrointestinal bleeding due to ulceration of the lesion. Extremely uncommon, transformation to liposarcoma has been documented [1, 3, 9].

When diameter exceeds 2 cm, symptoms are likely to appear. Smaller lesions are found incidentally with increased use of colonoscopy and they can be managed endoscopically [1, 5]. Preoperative diagnosis is important for planning; however, due to variable presentation and appearance, discrimination from malignant lesions can be difficult. There are different modalities for diagnosis of colonic lipomas [2, 7, 8, 10]. They are seen as an ovoid, well demarcated radiolucent mass in barium enema series. "Squeeze sign" is the change of a lipoma into a fusiform appearance with the colonic peristalsis, but it is not totally reliable because if the lesion is located in the right colon or ulcerated it is hard to differentiate from colonic malignancy [7, 8]. Colonic lipomas are usually seen as a submucosal mass covered by normal colonic mucosa at colonoscopy. Elevation of mucosa by the biopsy forceps ("tent sign"), indentation by pressing on it ("cushion sign"), or extrusion of fat after biopsy ("naked fat sign") can also be seen. Sometimes necrotic mucosa, ulceration, and relatively hard texture of the lesion make it difficult to differentiate from a malignant lesion. When the lesion is actively bleeding, endoscopic biopsy may not be safe and reliable. Computed tomography has been reported to be the most useful tool for detection of these lesions. Generally, they are seen as spherical or ovoid masses with absorption densities of -40 to -120 Hounsfield units, typical of fat. CT appearance may be atypical if fat necrosis or infarction is present. For large colonic lipomas and acutely ill patients, CT and MRI may be more useful in showing fatty composition of the tumor [1, 7-9]. Despite the diagnostic tools, differentiation from malignant processes is the main challenge before surgical resection. A firm diagnosis of colonic lipoma can be established fundamentally based on the histopathological examination [3, 9, 11, 12].

Ninety percent of colonic lipomas are localized to the submucosa; colonic lipomas are rarely found in other layers of the bowel wall [5, 9, 13, 14]. Furthermore, the submucosal location of these tumors has led to several techniques for endoscopic removal, including endoloop excision, nylon loop-assisted removal, endoclipping, and sectioning of the overlying mucosa via segmental cuts. However, endoscopic resection of large CL is controversial, because of prior reports of a high rate of perforation. It is postulated that lipomatous tissue contains low water content and therefore conducts electrosurgical current less efficiently. Thus, increasing the power to assist the endoscopic resection may lead to increased heat production and damage to the adjacent bowel wall with subsequent perforation [1, 7, 12, 14]. One of the most common and feared complications of endoscopic removal is colonic perforation, although its true incidence is likely underestimated due to the rarity of lipomas. The clinical diagnosis of a lipoma can be very difficult [7, 12, 14]. In fact, several cases of lipomas with overlying villous adenomas or other presentations mimicking carcinomas have been reported in the literature [7, 12, 15]. In most cases; segmental surgical resection is the most appropriate treatment, as it ensures proper collection of lymph nodes for appropriate staging of presumed colonic carcinoma. According to Jiang and colleagues, surgical intervention is warranted when the lipoma is more than 4 cm in size; there is an unclear preoperative diagnosis; the lipoma has associated morbidity (intussusception) and the patient is symptomatic; there is involvement of the muscular or serosal layer; or the lesion cannot be radically resected endoscopically [7, 12, 14].

This is a case of transverse colonic lipoma which was presented with a misleading Gastroenteritis for which upper and lower endoscopies were done for recurrent and persistent symptoms and revealed tumor like mass in the transverse colon for which transverse colectomy with primary anastamosis was done and histopathology came as the rare colonic lipoma.

Case report

A 38 years old male with no co-morbidities, with history of appendectomy few years back, came to Emergency room with 5 days history of left sided abdominal pain, which was associated with vomiting and diarrhea. Flagyl and antispasmodic were prescribed and he was sent home. Next day presented again with persistent abdominal pain which became diffuse and associated with distension, Loose motion 7-9 times, Blood in stools, Abdomen lax was lax on examination. Plain abdominal radiograph was unremarkable (Figure 1).

Pelviabdominal U/S showed Fatty liver. The patient was admitted under Internal Medicine as Gastroenteritis. Stool analysis showed Entamoeba histolytica cysts with RBCs and pus cells. The patient condition improved on flagyl and ciprofloxacin and was discharged after 7 days. During follow up in the outpatient clinic he was still complaining of epigastric pain. Upper Gastrointestinal endoscopy was done revealed mild non-erosive antral gastritis (Figure 2).

As the patient was still complaining of abdominal pain in the epigastric area a suspicion of transverse colonic mass was confirmed by colonoscopy which showed 4-5 cm polypoid mass in mid-transverse colon with ulcerated surface and long stalk with significant luminal narrowing and was biopsied (Figure 3). Colonoscopic biopsy revealed ulceration, granulation tissue with spindle cell formation and epithelial cells insufficient for diagnosis.

Pelviabdominal Computed tomography showed large polyp at the distal transverse colon surrounded by mucosal thickening and fat stranding which could represent malignant features, Intussusception is a differential diagnosis (Figure 4).

Transverse colectomy with primary anastamosis was done, and final histopathology came as submucosal lipoma with mucosal ulceration, focal areas of hemorrhage and hyperplasic changes. The patient had an uneventful postoperative course and was discharged home on the fifth postoperative day.

Discussion

The incidence of colonic lipoma ranges between 0.035 and 4.9%. Most of bowel lipomas are located in the colon, the most common site. There is a feminine predominance, and the age of discovery is generally between 50 and 65 years. The symptomatology is not specific. The majority of colonic lipomas are asymptomatic and do not require treatment, however, a small number may cause symptoms when the lesion is large, particularly those with a diameter >2 cm. They can result in persistent or intermittent abdominal pain, bloating, changes in bowel habits, gastrointestinal bleeding, bowel obstruction, or intussusception. One of the remaining challenges in the management of colonic lipoma is to establish the diagnosis preoperatively. They are often found incidentally during colonoscopy or radiologic imaging. Three diagnostic tools can bring arguments in favor of the diagnosis: colonoscopy allows mostly visualizing the

lipomatous lesion characterized by a rise of the mucous membrane, softness of the mass under the biopsy forceps and finally the visualization of yellow fat on biopsy. Endoscopic or surgical removal is indicated for symptomatic colonic lipomas or when malignancy is suspected or known. In this case, the pre-operative biopsy during colonoscopy revealed numerous ulcerative lesions with local epithelial regeneration, without malignant tumor cells. The patient underwent segmental resection of the transverse colon.

We found that this is only the eighth report of a transverse colonic lipoma published in the literature. The size of colonic lipomas ranges between 2 mm and 30 cm and may mimic colonic malignancies. The present case revealed that large colonic lipomas and malignant tumors may be difficult to differentiate prior to resection if only endoscopic observations are used. Due to the nonspecific clinical presentations and endoscopic appearance, including the multiple areas of erosion and ulceration that were identified on the mass surface, the two may be indistinguishable. However, for colonic lipomas of a large size and in acutely ill patients, CT is the preferred diagnostic method, as the imaging characteristics of the tumors are fairly typical for adipose tissue.

However, an intraoperative frozen section may provide an accurate diagnosis to guide surgery. In the present case, the preoperative biopsy during colonoscopy revealed ulceration, granulation tissue with spindle cell formation and epithelial cells insufficient for diagnosis. The patient underwent transverse colectomy with primary anastamosis. Final histopathology revealed submucosal lipoma with mucosal ulceration, focal areas of hemorrhage and hyperplasic changes.

Conclusions

Colonic lipoma is a relatively rare benign tumor, which as a clinical entity may be easily misdiagnosed as a malignant tumor. The clinical awareness of colonic lipomas must be increased. The clinical presentation of colonic lipomas may be anywhere in the spectrum between asymptomatic lesions and life-threatening complications. Laparoscopic resection can be the first choice in patients with unclear preoperative diagnosis, complicated cases like intussusception, lipomas not suitable for endoscopic removal, whenever endoscopic removal cannot be performed safely with negative margins, and lipomas located in the muscular or serosal layer. Laparoscopic resection is a good alternative to open conventional surgery with all the known advantages of minimally invasive procedures.

References

1. Corman, M., Less common tumors and tumorlike lesions of the colon, rectum and anus, in Colon & Rectal Surgery, M. Corman, Editor. 1998, Lippincott-Raven Publishers: Philadelphia, New York. p. 884–958.
2. Vecchio, R., et al., Lipomas of the large bowel. European Journal Surgery, 1996. 162(11): p. 915-9.
3. Goasguen, N., et al., Colonic lipoma: case report and literature review. Gastroenterol Clinical Biology,2008. 32(5 Pt 1): p. 521-4.
4. Kose, E., et al., Giant colonic lipoma with prolapse through the rectum treated by external local excision: A case report. Oncology Letters, 2014. 8: p. 1377-9.
5. Kwag, S., et al., Surgical Strategy for Colonic Intussusception Caused by a Giant Colonic Lipoma: A Report of Two Cases and a Review of the Literature. Annals of Coloproctology, 2013. 30(3): p. 147-150.
6. Soon, M., Y. Chen, and H. Yen, Editor's quiz: GI haemorrhage and an incomplete colonoscopy. Gut Journal, 2007. 56(4): p. 455-96.
7. Ivekovic, H., et al., Endoscopic ligation ("Loop-And-Let-Go") is effective treatment for large colonic lipomas: a prospective validation study. Gastroenterology, 2014. 14(122): p. 1-4.
8. William, M., Thompson Imaging and Findings of Lipomas of the Gastrointestinal Tract. American Journal of Roentgenology, 2005. 184.
9. Franc-Law, J., et al., The dramatic presentation of colonic lipomata: report of two cases and review of the literature. American Journal of Surgery, 2001. 67(5): p. 491-4.
10. Zhou, X., K. Hu, and Y. Jiang, A 4cm lipoma of the transverse colon causing colonic intussusception: A case report and literature review. Oncology Letters, 2014. 8: p. 1090-2.
11. Gould, D., et al., A Lipoma of the Transverse Colon Causing Intermittent Obstruction: A Rare Cause for Surgical Intervention. Gastroenterology & Hepatology, 2011. 7(7): p. 487-90.
12. Kim, C., et al., Endoscopic removal of large colonic lipomas. Gastrointestinal Endoscopy Journal, 2002. 55(7): p. 929-31.
13. Beer, R.D. and H. Shinya, Colonic lipomas. An endoscopic analysis. Gastrointestinal Endoscopy Journal, 1975. 22(2): p. 90-1.
14. Böler, D., B. Baca, and C. Uras, Laparoscopic resection of colonic lipomas: When and why? American Journal of Case Report, 2013. 14: p. 270-5.
15. Jr, S.R., M. Lee, and S. Ashley, Giant colonic lipoma as lead point for intermittent colo-colonic

intussusception. Surgery, 2002. 131(6): p. 687-8.

Reviews

Review 1

Review Title: Post publication Peer Review

Posted by Dr. Fazl Q Parray on 12 Nov 2014 05:07:10 PM GMT

1	Is the subject of the article within the scope of the subject category?	
2	Are the interpretations / conclusions sound and justified by the data?	
3	Is this a new and original contribution?	
4	Does this paper exemplify an awareness of other research on the topic?	
5	Are structure and length satisfactory?	
6	Can you suggest brief additions or amendments or an introductory statement that will increase the value of this paper for an international audience?	
7	Can you suggest any reductions in the paper, or deletions of parts?	
8	Is the quality of the diction satisfactory?	
9	Are the illustrations and tables necessary and acceptable?	
10	Are the references adequate and are they all necessary?	
11	Are the keywords and abstract or summary informative?	

Rating: 6

Comment:
The paper would look more reliable and complete if supported by : Endoscopic picture,perop picture and microphotograph of Histopathology

Invited by the author to make a review on this article? : Yes

Experience and credentials in the specific area of science:
working as a Professor in colorectal division in a high volume centre

Publications in the same or a related area of science: Yes

References:
1.Parray FQ,Hamid A,Ara R,Chowdri NA,Mir AB,Ahmed W,Lone AA.Atypical presentation of a stromal tumor of small gut.Internet J of Surg 2007;121(1). 2.Chowdri NA,Gagloo MA,Parray FQ,Shiekh ZA,Wani RA.Perianal giant condyloma acuminate(buschke-lowenstein tumor)-first case report from Kashmir valley.Indian J of Surg 2007;69:203-205. 3.Wani I,Snabel v,Naikoo G,Wani S,Wani M,Amin A,Shiekh T,Parray F Q,Wani R A. Encountering Meckel's diverticulum in emergency surgery for ascaridial intestinal obstruction.World Journal of Emergency Surgery 2010, 5:15doi:10.1186/1749-7922-5-15 4.Sameer AS,Syeed n,Chowdri NA,Parray FQ,Siddiqi MA. Squamous cell carcinoma of rectum presenting in a man: a case report. Journal of Medical Case Reports 2010, 4:392doi:10.1186/1752-1947-4-392.published :30th November 2010. 5.Parray F Q,Dar R A,Chowdri NA,Hamid A,Malik RA.Liposarcoma of the spermatic cord:A rare entity.Case reports in urology 2011;

How to cite: Parray F.Post publication Peer Review[Review of the article 'Colonic lipoma presented with attack of gastroenteritis: Case report ' by Othman M].WebmedCentral Surgery 1970;5(11):WMCRW003134

Review 2

Review Title: Colonic lipoma presented with attack of gastroenteritis: case report

Posted by Dr. Dnyanesh Belekar on 30 Oct 2014 10:31:44 AM GMT

1	Is the subject of the article within the scope of the subject category?	
2	Are the interpretations / conclusions sound and justified by the data?	
3	Is this a new and original contribution?	
4	Does this paper exemplify an awareness of other research on the topic?	
5	Are structure and length satisfactory?	
6	Can you suggest brief additions or amendments or an introductory statement that will increase the value of this paper for an international audience?	
7	Can you suggest any reductions in the paper, or deletions of parts?	
8	Is the quality of the diction satisfactory?	
9	Are the illustrations and tables necessary and acceptable?	
10	Are the references adequate and are they all necessary?	
11	Are the keywords and abstract or summary informative?	

Rating: 7

Comment:
I would like to congratulate all the authors specially Dr Salah Raslan for eporting such an interesting case report o Colonic lipoma and its management.

Invited by the author to make a review on this article? : Yes

Experience and credentials in the specific area of science:
I am treating variety of colorectal cases for last 15 years. I have also done International Fellowship of colorectal surgery from Germany.

Publications in the same or a related area of science: No

How to cite: Belekar D.Colonic lipoma presented with attack of gastroenteritis: case report[Review of the article 'Colonic lipoma presented with attack of gastroenteritis: Case report ' by Othman M].WebmedCentral Surgery 1970;5(10):WMCRW003129