Suspected Asymptomatic Large Colon Lipoma: Biopsy?

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Lipomas are the second most common benign tumors of the colon after adenomatous polyps. The greatest significance of lipomas lies in confusing them with adenomas and other pathological abnormalities. When symptomatic, colon lipomas present with abdominal pain, rectal bleeding and change in the bowel habits. Lipomas larger than 2 cm tend to be symptomatic or confused with cancer. This is the first case report of asymptomatic colon lipoma that was complicated by hemorrhage and bowel obstruction after endoscopic biopsy. In this report, we review diagnostic methods and therapeutic options.

INTRODUCTION

Gastrointestinal lipomas, though rare are the second most common benign tumors of the colon after adenomatous polyps. The diagnosis is difficult and is often mistaken for adenomatous polyp or cancer (1). Management of incidentally detected asymptomatic large colon lipomas has not been well studied. To our knowledge, this is the first case report of asymptomatic colon lipoma that was complicated by both hemorrhage and bowel obstruction after endoscopic biopsy.

CASE REPORT

A 59-year-old female with history of hypertension and hyperlipidemia, underwent routine colonoscopy that showed 3.5 cm lipomatous appearing polyp in the sigmoid colon. The patient was referred to the gastroenterology clinic for evaluation of the sigmoid mass. At this point, review of systems was negative. The patient had no previous surgeries and family history was unremarkable. The patient was taking atorvastatin and hydrochlorothiazide. One year after her initial procedure, a repeat colonoscopy revealed a 3.5 cm, soft, mobile, pedunculated mass in the sigmoid colon with positive pillow sign (indents when depressed using biopsy forceps) and was biopsied with cold forceps (Figures 1–3). Histopathology revealed smooth muscle prominence and fibrovascular tissue. One week after the procedure the patient presented with bright red blood per rectum and mild crampy abdominal pain. The patient was hemodynamically stable at her baseline hemoglobin level. Physical exam revealed left lower quadrant tenderness on deep palpation with no peritoneal signs. The patient underwent immediate flexible sigmoidoscopy that showed a completely obstructing purplish mass in the sigmoid colon with an overlying clot (Figure 4). A CT scan of the abdomen (continued on page 38)
showed a pendunculated soft tissue density consistent with lipoma and 2.9 cm mass in the lumen of sigmoid colon consistent with hematoma (Figure 5). The patient was managed conservatively; the bleeding resolved spontaneously and she was discharged to home. After one year of follow-up patient has remained asymptomatic.

DISCUSSION

The greatest significance of colon lipomas lies in confusing them with adenomas and other pathological abnormalities. These are rare benign tumors, whose incidence as reported in autopsy series vary from 0.035% to 4.4% and is slightly higher in women than in men. Colon lipoma occurs more commonly in the fifth and sixth decades of life (1,2,3). In the colon, lipomas are mainly right sided; located in the cecum, ascending colon, sigmoid colon, and in the order of decreasing frequencies (3). Usually they are solitary but multiple lipomas can occur in 15% of the cases (2). About 90% of colon lipomas originate from submucosa and the remaining are subserosa or intermu-

coseral (1,2). These lesions are encapsulated and are either sessile or pendunculated (1,2).

They can cause significant clinical symptoms such as rectal bleeding, abdominal pain, obstruction, intussusception and rarely spontaneous expulsion of the lipoma is reported (1,2,3). The most common symptoms are bleeding and abdominal pain. Clinical symptoms may be related to tumor size, which was 3.5 cm in patients with symptoms and 1.8 cm in those without symptoms (1). In general, lipomas of greater than 2 cms in diameter seem to be capable of producing symptoms (2).

Barium enema was the most frequent exam performed with most characteristic finding “squeeze sign”; the shape of the filling defect is not consistent. It is round in the filling phase but assumes an elongated configuration during evacuation (3).

On endoscopy, lipoma is a mobile soft mass, can have a yellow hue, and often exhibit a “pillow sign,” i.e., indentation of the lesion when probed with closed forceps (4). Grasping the mucosa with biopsy forceps produces a “tenting effect” when the mucosa pulls away from the tumor. Repeated biopsies at the same site may result in “naked fat sign,” i.e., an extrusion of
A CASE REPORT

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yellowish fat. When the lipoma is removed, it will usually float in the formalin fixative because of low density fat. (4,5).

A CT scan can provide definite diagnosis because the mass is typically spherical or oval in shape with a well-demarcated outline and homogeneous density of adipose tissue with densitometry values between –40 to –120 Hounsfield units. Liposarcomas can be differentiated by higher densitometry values than fat and inhomogenous density and irregular contour (6,7). Liposarcomas of the gastrointestinal tract, arising either spontaneously or through malignant degeneration of a lipoma are so rare as to be of no practical consideration in the differential diagnosis of fatty tumors of the gastrointestinal tract (7). In our case a CT scan provides accurate data about mass shape structure with densitometry values. However, these features are evident only in large lesions, as smaller tumors may not be detected (8). CT colonography and magnetic resonance imaging studies appear to improve evaluation of lipomas but often further evaluation is necessary (9,10).

On endosonography, lipoma is an intensely hyperechoic, well-circumscribed mass arising from submucosal wall layer (11,12). Endosonography can clearly define the size of the tumor and its layer of origin, even

Figure 3. Endoscopic view of pillow sign.

Figure 4. Flexible sigmoidoscopy showing completely obstructing purplish mass one week after biopsy.

Figure 5. CT scan of abdomen revealing oval shaped homogeneous mass (white arrows) with densitometry value of –67 Hounsfield units.
more importantly the vascular structures in a solid lesion (13). Biopsy is not recommended in a majority of the cases as lipoma is underneath mucosa and may result in complications such as bleeding or obstruction (8).

When the lesion is symptomatic or the nature of the sub-mucosal mass is unclear surgical or colonoscopic removal is performed. Pfeil, et al reported in a case series that endoscopic snare removal has a risk of perforation up to 42.8%, especially for large broad based sessile polyps. In this case series, all the lipomas that subsequently perforated contained portions of muscularis propria. (4). Endosonography may be useful in confirming that the muscularis propria is not contained within the pedicle of the lesion (12). To reduce the risk of perforation novel techniques such as Endoscopic Ultrasound Imaging to ensure lipoma does not extend into the muscularis propria with electrosurgical snare resection after injection of the base with epinephrine or saline and endoloop ligation followed by snare resection were described (11,14).

In summary, Colon lipomas can be diagnosed by colonoscopy by their characteristic features i.e., mobile, soft mass with positive pillow sign and CT scan appearance of smooth borders and uniform fat equivalent density. As in our case, biopsy may be unyielding and can result in complications such as bleeding and or obstruction.

References