

MDCT FINDINGS OF MULTIPLE INTESTINAL AND INTRAPANCREATIC LIPOMAS: A CASE REPORT

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ABSTRACT:

Although lipomas are the second most frequent benign tumors of the gastrointestinal tract, the development of multiple lipomas in the stomach, duodenum, jejunum, ileum, and colon is extremely rare. Pancreatic lipomas are rare benign lesions. We present a patient who had multiple lipomas in various localizations in the gastrointestinal system and two concomitant intrapancreatic lipomas. Multidetector computed tomography depicted lipomas as homogeneous, nonenhancing, well-marginated lesions with a density compatible with that of adipose tissue.

Key Words: Lipoma, Intestinal, Pancreatic, MDCT.

MULTİPL İNTESTİNAL VE İNTRAPANCREATİK LİPOMLARIN ÇOK KESİTLİ BT BULGULARI: OLGU SUNUMU

ÖZ:

Bu olgu sunumunda; çok kesitli BT ile multiple intestinal lipomlara eşlik eden intrapancreatik lipomu olduğu tespit edilen nadir bir olgu sunulmaktadır. Gereç ve Yöntem: 77 yaşındaki kadın hasta karın ağrısı ve halsizlik şikayetleri ile hastanemize başvurdu. Laboratuvar tetkiklerinde bulunan demir eksikliği anemisini araştırmaya yönelik üst ve alt GİS endoskopisi ve BT tetkikleri yapıldı. IVKM öncesi ve sonrasında 16 kanallı çok kesitli BT (ÇKBT) ile kesitler alınmıştır. Bulgular: Endoskopik ve koloskopik incelemelerde mide anterior duvarında ve çekumda geniş tabanlı, üzeri normal mukoza ile kaplı polipoid lezyonlar saptandı. BT ile mide, duodenum, jejunum, ileum, çekum ve asendan kolonda düzgün yüzeyli, ovoid şekilli, yağ dansitesinde kitleler izlendi. İnsidental olarak ÇKBT’de pankreasta da iki adet yağ dansitesinde lezyon dikkati çekti. Sonuç: Gastrointestinal sistemin multiple lipomlarına eşlik eden intrapancreatik lipom literatürde çok nadir görülmektedir. Bildiğimiz kadarıyla bu iki durumun birlikte bulunduğu yalnız bir vaka bulunmaktadır. Abdominal BT intestinal lipom ve intrapancreatik lipomların tanısında tercih edilmesi gereken yöntem olmalıdır.

Anahtar Kelimeler: Lipom, İntestinal, Pankreatik, Çok Kesitli Bilgisayarlı Tomografi

INTRODUCTION

As stated in previous reports, intestinal lipomas are uncommon and slow-growing benign lesions that can occur anywhere along the gut. They are usually solitary but can be multiple anywhere in the gastrointestinal tract. The colon is the most common gastrointestinal site of lipomas. On computed tomography (CT) the finding of a homogeneous mass with Hounsfield units between -80 and -120 is virtually diagnostic of a lipoma.

Pancreatic lipomas are rare benign lesions and most of them are diagnosed incidentally on CT scans or ultrasonography. On CT, the values ranging from -80 to -120 HU indicate a lesion composed of fat. CT can readily detect these lesions, like the other fat containing abnormalities of the pancreas and no further examinations are indicated. In this case report, we present a patient with abdominal pain and iron deficiency anemia who had multiple intestinal lipoma and two concomitant intrapancreatic lipomas on multidetector computed tomography (MDCT).

CASE REPORT

A 77-year-old woman was admitted to our hospital with intermittent abdominal pain and chronic weakness. She had an 8-year history of gastrointestinal bleeding. A hematological laboratory examination revealed anemia due to iron deficiency. Other laboratory examinations and the physical examination of the abdomen were normal. For further investigation of the anemia due to iron deficiency, an upper and lower intestinal endoscopic examination and contrast enhanced abdominal tomography were performed. The endoscopic examination showed a soft, elevated, broad-based polypoid lesion, covered by normal mucosa, on the anterior wall of the stomach, without superficial erosion or ulceration. Colonoscopy revealed a small, 5 mm to 1 cm in diameter, broad-based, polypoid lesion covered by normal mucosa at the level of the cecum. A CT scan of the abdomen was performed with a 16-row MDCT (Sensation, Siemens, Erlangen, Germany) with 5 mm thickness, both before and after the intravenous administration of contrast material. The axial images were evaluated with coronal and sagittal 2D reconstructions created on a workstation (Leonardo, Siemens). On CT, the presence of numerous smooth, ovoid, or spherical masses averaging 1-3 cm in diameter, homogeneous in density, and exhibiting attenuation values of -80 to -115 H indicated a diagnosis of multiple gastrointestinal lipomas. The lipomas

were localized in the stomach (Figure 1), duodenum (Figure 2), jejunum (Figure 3), ileum, cecum, and ascending colon. MDCT scans with sagittal and coronal 2D reformatted images showed that the intestinal lipomas were submucosal lesions. The biggest lipoma in the jejunum was surgically removed to prevent intestinal intussusception. The pathologic examination confirmed that the lesion was a benign lipoma. The endoluminal 3D image from MDCT scans showed a smooth, ovoid, and pedunculated lesion that could not be detected by endoscopy (Figure 4). Incidentally, a rounded, sharply margined, 8 mm in diameter, fat-density (-135 HU) lesion in the body of the pancreas and an angular 12 x 5 mm, well defined, fat-density (-90 HU) lesion in the head-body junction were seen on MDCT scans (Figure 2). These lesions were homogeneous in appearance and completely encircled by pancreatic parenchyma with no contrast enhancement. There was no ductal dilatation and no biliary tract obstruction. Histopathologic confirmation was not obtained for intrapancreatic lipomas.

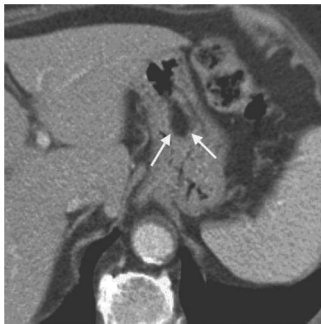


Figure 1. Axial CT image shows several low-attenuation masses in stomach (arrows). Attenuation of masses ranged from -40 to -100 HU, consistent with fat



Figure 2. CT image shows several low-attenuation masses in duodenum (large arrows) and an angular and well defined fat-density lesion consistent with lipoma in the head-body junction of the pancreas (small arrows).

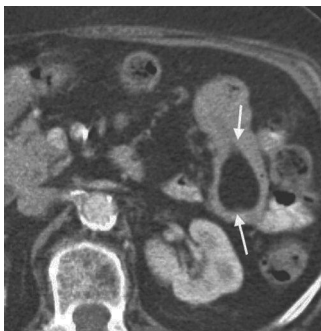


Figure 3. Figure 3. CT image shows several low-attenuation masses in jejunum (arrows)

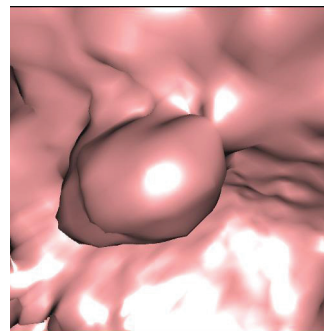


Figure 4. Endoluminal 3D image from MDCT shows a smooth, ovoid, pedunculated lesion in the ascending colon wall. Axial CT images (not shown) showed that the lesion had the attenuation of fat.

DISCUSSION

Lipomatosis involvement of the gastrointestinal tract is a rare disorder, for which few cases have been reported in the literature. The term “intestinal lipomatosis”, first reported by Hellstrom in 1906, has been used to describe the presence of numerous circumscribed lipomas in the intestine. Gastrointestinal lipomas are rare submucosal tumors, mainly found in the

right colon. Approximately of 65%-75% of gastrointestinal lipomas occur in the colon, 20%-25% occur in the small bowel, and 5% occur in the stomach. This disorder is extremely rare. We have found only 33 cases documented in the English-language literature. Many lipomas are found incidentally, but they can have a pseudopedicel and cause an intussusception. When they are larger than 2 cm, they may ulcerate, leading to acute or chronic anemia.

Lipoma is the only intramural gastrointestinal lesion that can be diagnosed by CT, as a well demarcated mass with a characteristic fat density. Strands of soft-tissue density may be seen within the lipomatous mass and correlate to microscopic fibrovascular components. Most lesions are small and are generally discovered incidentally by CT. Magnetic resonance imaging (MRI) may be particularly useful in the detection of lipomas as the signal intensity is characteristic of adipose tissue on T1-weighted and fat-suppressing images. Large lipomas may produce symptoms such as abdominal pain, rectal bleeding, and altered bowel habits due to intermittent intussusception or hemorrhage. Our patient had a history of abdominal pain and long-lasting rectal bleeding that resulted in iron deficiency anemia. The endoscopic examination demonstrated only two lipomas in the stomach and the cecum, but the MDCT examination successfully showed all the lipomas in the stomach, duodenum, jejunum, ileum, and colon as well-demarcated masses with fat density. MDCT directly depicts both the wall (allowing evaluation of thickness and structural characteristic) and adjacent structures (mesentery, adjacent fibrofatty tissue, lymph nodes, and peritoneal spaces).

The full characterization of submucosal lesions may be difficult with optical endoscopy alone, and endoscopic biopsy is often nondiagnostic. MDCT allows evaluation of the entire thickness of the bowel wall and surrounding tissues and often provides additional information with regard to lesion origin, internal composition, and extent of disease. Incidentally, two intrapancreatic lipomas were found on CT examination in our patient, which is a rare entity in the literature. Pancreatic lipomas are rare benign lesions, with about 21 cases documented in the current literature. Lipomas of the pancreas are usually incidental findings, thus masking their true incidence. In our case the diagnosis was made with CT. Hois et al. hypothesized that lipomas that occur in the head and neck of the pancreas may be remnants of trapped mesenteric or retroperitoneal fat during embryologic development. Lipomas are benign tumors of homogeneous adipose tissue that is histopathologically identical to subcutaneous fat and entirely circumscribed by a thin (<2 mm) collagen capsule that may contain fibroreticular septa and scattered vessels (11). Diagnostic imaging, in particular CT, can be readily used to diagnose lipomas. On CT, they appear as solid, homogeneous, well-margined, hypodense tumors with a density consistent with that of fat. With the distinguishing imaging characteristic of lipoma, CT can differentiate this lesion from other types of localized pancreatic fatty masses, such as focal fatty infiltration (also known as fatty replacement, adipose atrophy, or lipomatosis) including lipomatous pseudo-hypertrophy, teratoma, and liposarcoma.

Focal fatty infiltration can be differentiated from a lipoma by its direct contact with adjacent peripancreatic fat and its lack of a distinct collagen capsule, in contrast to a lipoma. Liposarcomas are usually larger than lipomas, with thicker bands of collagen defining the tumor. The most reliable method to distinguish a lipoma from a well-differentiated liposarcoma is its homogeneous CT fatty attenuation.

On the basis of the published literature, multiple lipomas of the gastrointestinal system and concomitant intrapancreatic multiple lipomas are very rare entities. To the best of our knowledge, there is only one report of the occurrence of these two conditions in one patient. Abdominal CT should be the modality of choice in the diagnosis of intestinal lipomas and intrapancreatic lipomas.

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