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Leiomyomatous polyp presenting as Intussusception in an elderly female - A Rare Case Report

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ABSTRACT

Intussusception is quite common in the gastrointestinal tract and that too in the paediatric population though the aetiology is mostly idiopathic (90%). While in adults it is rare and is usually caused by an identifiable underlying lesion mainly neoplasm (70-90%) which usually acts as a lead point. It has a non-specific clinical presentation with a limited role of history and examination in the final diagnosis and Computed tomography is considered the gold standard investigation in establishing the diagnosis. We present an unusual case of jejuno-jejunal intussusception which was caused by a leiomyoma polyp. Thus an Exploratory laparotomy was done, resecting the polyp with the jejunal segment and the diagnosis was confirmed by histopathological examination.

Keywords: Intussusception, Jejunal, Leiomyoma, Histopathology

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INTRODUCTION

Intussusception is defined as the telescoping of one segment of the bowel into another adjacent segment [1,2]. The telescoping proximal segment is called the intussuceptum and the receiving distal segment is called intussuscipiens [1].In the pediatric population, intussusception is the most common abdominal emergency in children below 2 years of age [2]. Four different types of intussusception include ileocolic, also ileocolic, colo colic and small bowel intussusceptions [3,9]. The common type of intussusception in the pediatric population is ileocolic while infection causes hypertrophy of Peyer's s patch.is the second most common cause. Among adults, the most common cause is benign or malignant neoplasm including Intra bowel leiomyoma, jejunal lipoma, leiomyosarcoma, adenoma, hemangioma and fibroma comprising one-third of the cases [3,5]. The clinical presentation is quite variable but common presentation includes abdominal pain and bowel obstruction [3]. The preferred imaging modality is Computed tomography which shows the classical finding of target, bulls' eye or sausage-shaped concentric hyperdense double ring denoting outer intussuscipiens and central intussusceptum [1].

CASE REPORT:

We report a case of a 68-year-old female who presented with complaints of diffuse abdominal pain for the past 20 days which was gradual in onset, progressive, moderate to severe in intensity and was not relieved by medication. She also complained of vomiting on and off and the vomitus had undigested food particles. The patient had no history of fever, cough with or without sputum, loss of weight and appetite and no yellowish discolouration of the eyes. The bowel and bladder habits were normal. Her gynaecological menstrual history was insignificant. On physical examination, she was hemodynamically stable and hydrated. Local examination revealed abdominal tenderness in all the quadrants with no mass, distension or guarding. Abdominal ultrasonography appeared to show telescoping one bowel loop into another bowel loop giving a target sign with well-defined hyperechoic polypoidal mass as a lead point. Contrast-enhanced computed tomography of abdomen was taken that showed evidence of well-defined pedunculated lesion measuring 3 x 2 x 2cms arising from wall projecting into the lumen of jejunum with one jejunal loop pulled into another jejunal loop showing concentric ring appearance measuring 14-15cms long. Finally, the patient underwent surgery in which jejunal resection was done with jejuno jejunal anastomosis and the specimen of jejunum along with mesentery was sent to the department of Pathology for histopathological examination. A gross examination of Resected specimen was carried out. Jejunal bowel loop measured 45x10cms and had attached mesentery (Figure 1). A globular polypoidal intramucosal growth was identified

measuring 3x2.5x1cms. The cut section showed polypoidal growth arising from the mucosal surface of the intestine. It was homogenous white with a firm consistency (Figure 2). Microscopic examination of the section obtained from polypoidal growth showed focally ulcerated mucosa with an underlying well-circumscribed area of interlacing fascicles of proliferating spindled cell myofibroblasts with intervening fibro collagenous stroma along with blood vessels. Section from resection margin and normal mucosa showed focally ulcerated mucosal lining along with dense transmural inflammatory infiltrate and numerous dilated and congested blood vessels (Figure 3, 4, 5).Section from lymph node showed features of reactive lymphoid hyperplasia. The diagnosis based on gross and microscopic findings was benign spindle cell neoplasm with differential diagnoses of 1) Leiomyoma and 2) GIST. For confirming the diagnosis immunohistochemical marker including SMA, CD34, and CD117 were applied. On IHC examination, SMA showed diffuse strong cytoplasmic positivity in spindle cells (Figure 6) while CD34 and CD117 were negative (Figure 7). Thus a final diagnosis of Leiomyomatous polyp was made.

Figure 1: Resected specimen showing jejunal bowel loop and attached mesentery

Figure 2: Cut section of polypoidal intramucosal growth showing homogenous white firm lesion

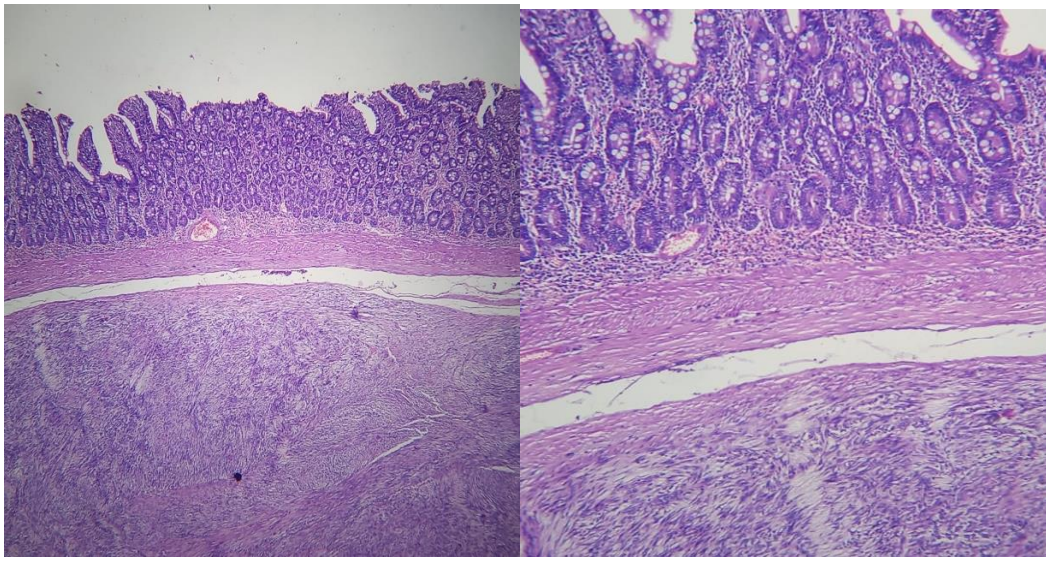

Figure 3, 4: Section showing focally ulcerated mucosa with an underlying well-circumscribed area of interlacing fascicles of proliferating spindled cell myofibroblasts with intervening fibro collagenous stroma along with blood vessel (H and E X5)(H and E X10).

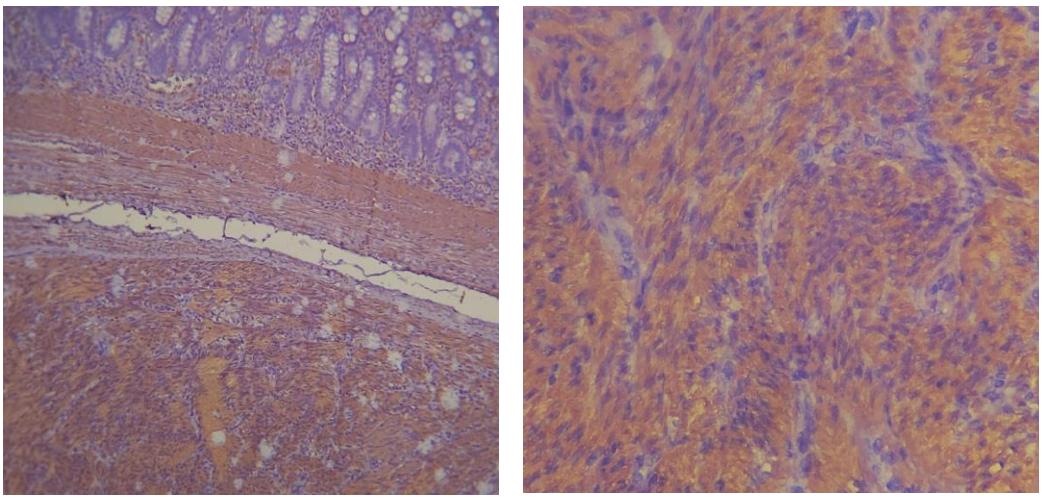

Figure 5, 6: Immunohistochemistry with Smooth Muscle Antigen (SMA) showed diffuse strong cytoplasmic positivity in spindle cells

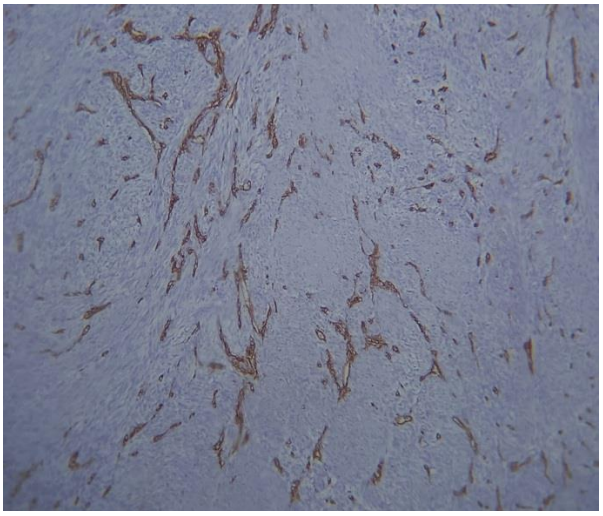

Figure 7: Immunohistochemistry with CD34 showing negative staining ins spindle cells and positive staining in vessels only.

DISCUSSION:

Intussusception is more discussed in the pediatric population but in Adults, its occurrence is even rarer accounting for 1% of all bowel obstruction cases [5,7]. Etiological factors include intestinal inflammatory polyp, Intra bowel leiomyoma, jejunal lipoma, lymph nodes, leiomyosarcoma, adenoma, hemangioma, fibroma as well as idiopathic causes [7]. The average age of onset is 54 years with a male to female ratio of 1:1.3 [5]. Almost 90% of adult cases are secondary to pathological condition that acts as a lead point [7]. Intussusception occurs when a proximal portion of the bowel – intussusceptum (jejunum in the above case) is pulled forward by normal peristalsis telescoping into distal bowel- intussusception (jejunum in the above case). The interssusceptum is often accompanied by mesentery resulting in lymphatic obstruction followed by venous congestion and finally impaired arterial blood flow [5]. The best imaging modality to diagnose intussusception is Computed tomography. The classical finding on CT is target, bulls' eye or sausage-shaped lesion with concentric hyperdense double ring denoting outer intussuscipiens and central intussusceptum[1]. Additional modalities include Barium or Gastrograffin enema showing the cup-shaped filling defect [1]. Abdominal X-ray finding of intussusception includes a double bubble sign while that of Ultrasonography is doughnut appearance (target sign) [4]. In the above-discussed case, histopathological examination and immunohistochemical were confirmative of Leiomyomatous polyp which is a slow-growing benign mesenchymal soft tissue tumour that can arise anywhere in the body [5,8]. In the alimentary canal most common site is the oesophagus, but uncommon in the small bowel and colon. Symptoms of Leiomyoma depend on the location in the gastrointestinal tract[5]. Important

differential diagnoses include Leiomyosarcoma and Gastrointestinal Tumour (GIST) which can be differentiated with Immunohistochemistry markers. In leiomyosarcoma, CD117 and CD34 are negative whereas SMA and Desmin are positive while GIST is positive for CD117 and CD 34.

CONCLUSION

Although Intussusception is common in the pediatric population adult intussusceptions are rare and always have a pathological lead point. It is important to diagnose the lead point which was leiomyoma in our case which is even rarer. Adult intussusception should be timely diagnosed to establish its benign or malignant nature, thus initiating a timely treatment and preventing further complications.

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