

Megaduodenum in a patient with acromegaly

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ABSTRACT

Introduction: Acromegaly is associated with enlargement of all organs including the gastro intestinal system. However, there are no previous reports of occurrence of megaduodenum in patients with acromegaly. **Discussion:** We present the case of a 47 year old male who was diagnosed to have acromegaly 13 years ago and had undergone transsphenoidal surgery twice with incomplete removal of the pituitary macro-adenoma and received radiotherapy following the second surgery. Patient has been on replacement therapy for hypocortisolism, hypothyroidism and hypogonadism since 10 years. Post glucose growth hormone level continued to remain unsuppressed; however, patient never received any medical therapy for acromegaly. He was evaluated with esophago-gastro-duodenoscopy for recurrent abdominal pain and distension, which showed an elongated and tortuous megaduodenum. These findings were verified with a barium study which revealed dilated stomach, first and second part of duodenum with no evidence of a distal obstruction. **Conclusions:** We report this finding in view of the rare association.

Key Words: Acromegaly, megaduodenum, duodenum

INTRODUCTION

Acromegaly is an uncommon disorder which is characterized by excessive secretion of growth hormone, resulting in exaggerated growth of almost all tissues in the body. Bone and soft tissue enlargement along with visceromegaly is commonly seen in patients with acromegaly. The gastro intestinal system is also involved, and there have been concerns of increased incidence of colonic carcinoma among these patients. Though this has not been clearly demonstrated in other studies, there is an increased risk of hyperplastic polyps and intestinal enlargement has been known to occur with acromegaly. Here, we report a case of megaduodenum associated with acromegaly in a 47 year old male patient.

The patient had initially presented with features of acromegaly 13 years ago and had undergone transsphenoidal

surgery in 1999 for a pituitary macroadenoma. However, in view persistently elevated post glucose GH levels, he was subjected to a second transsphenoidal surgery in 2001. He also received radio therapy following the second surgery. Patient has been on replacement doses of levo thyroxine, prednisolone and testosterone supplements since then. Even though the soft tissue regression was noted, patient still continued to have diabetes requiring oral anti hypoglycemic therapy. Repeated estimations of growth hormone following 75gm of glucose were not suppressed. Patient never received any medical therapy for acromegaly.

He had complaints of recurrent episodes of abdominal discomfort and pain, occasional vomiting and alternating constipation with diarrhea. Upper GI symptoms like belching, abdominal fullness and bloating were also present throughout. He underwent multiple hospital admissions elsewhere for the same complaints and symptoms would subside with a course of antibiotics, proton pump inhibitor and prokinetic drugs. On evaluating with esophago gastro duodenoscopy, he was found to have an elongated, tortuous and distended duodenum which was reported as megaduodenum. He underwent a barium meal study for confirming this finding and for ruling out any distal obstruction. The barium study revealed a dilated stomach, enlarged first and second part of duodenum with delay

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Figure 1: Barium study showing distended first and second part of duodenum

in distal filling; however, there was no evidence of any mechanical distal obstruction.

Megaduodenum refers to the condition of enlarged and distended duodenum most often seen in neonates due to congenital or hereditary causes which may present with pseudo obstruction. Causes for megaduodenum include congenital duodenal atresia, superior mesenteric artery syndrome, annular pancreas, congenital aganglionosis, visceral myopathy, Chagas disease caused by *Trypanosoma cruzi* and systemic sclerosis. Patients typically present with upper GI symptoms which have been present for a very long duration, or may present with vomiting due to pseudo obstruction. Pathogenesis is thought to be due to an asynchronism that exists between the movements of the duodenum and the duodenojejunal angle, causing duodenal stasis. This disease should be suspected in any patient with an enlarged duodenum without a distal mechanical

obstruction. Histopathological study may show lesions of the ganglion cells, causing destruction of neurons forming the plexuses.

Treatment is largely based on symptoms and is based on dietary modification and control of bacterial overgrowth. Surgical intervention is recommended in symptomatic cases with obstructive symptoms. Gastro jejunostomy or duodenojejunostomy along with partial enterectomy with re-establishment of intestinal transit by end to end anastomosis has been advocated.

Coming back to the patient, he is currently doing well on conservative management and is on close observation for development of any obstructive symptoms. Barium meal study picture attached as ppt slide [Figure 1].

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