

# VASCULAR MALFORMATION WITH OSSEOUS METAPLASIA OF THE MESENTERY AS A CAUSE OF ACUTE ABDOMEN IN A SEVEN YEARS OLD CHILD

Amjad Ali, Muhammad Asad Khan, Muhammad Imran, Sadaf Kalsoom

Department of Pediatric Surgery, Medical Teaching Institute, Khyber Teaching Hospital, Peshawar - Pakistan

## ABSTRACT

**Objective:** Vascular anomalies are of two types: 1 Hemangiomas and 2 vascular malformations (VMs). Hemangiomas are apparent at birth but they may be noticed or become symptomatic later in neonatal life. The natural course of hemangioma is early proliferation during the first few years of life and regression in late childhood. They disappear usually by the age of 12 years. VMs, on the other hand, usually develop later in life and the size of the mass increases with age. An exclusive mesenteric vascular anomaly is a rare entity. Specifically, the incidence of VMs type of anomaly with osseous metaplasia is infrequent. In the available literature, two cases of abdominal vascular anomaly of hemangioma type have been reported. This case is being reported to alert clinicians to the wide variety of mesenteric and retroperitoneal masses and their varied presentation sometimes in emergencies like an acute abdomen or intestinal obstruction. The radiological signs may also be confusing at times as in this case where the radio-opaque shadow on an x-ray was mistaken for a phytobezoar.

**Keywords:** vascular malformation, osseous metaplasia, acute abdomen

---

**This article may be cited as:** Ali A, Khan MA, Imran M, Kalsoom S. Vascular Malformation With Osseous Metaplasia Of The Mesentery As A Cause Of Acute Abdomen In A Seven Years Old Child. J Med Sci 2022 October;30(4):329-331

---

## CASE PRESENTATION

A seven-year-old, 26 kg boy presented to our emergency pediatric surgical unit with a history of pain abdomen, fever, vomiting, and constipation for 3 days. Past surgical and medical history was insignificant except for a similar episode of pain a month ago. General physical examination was unremarkable except for pallor. His abdomen was mildly distended with mild tenderness around the umbilicus. There was no palpable mass or organomegaly. Total leukocyte count was raised (14500/mm<sup>3</sup>), Hemoglobin was low and platelet count was normal. C- reactive protein was within the normal range. Initial ultrasonography showed no pathology except for the fluid-filled gut loops with hypoperistalsis. X-ray erect abdomen showed a round radio-opaque shadow in the center of the

abdomen right lateral to L4 (Figure 1). The lateral plain film confirmed that the lesion is separate and not

arising from the spine (Figure2). An initial diagnosis of phytobezoar was made and the patient was conservatively managed with intravenous antibiotics, fluids, and analgesics. The patient did not improve in 36 hours and was subsequently explored. Per operatively, there was a mass in the mesentery of the small bowel with extension into the retroperitoneal space cranially and closely abutting the pancreas (Figure 3).

The patient recovered uneventfully. He was discharged on the 4th postoperative day with a total hospital stay of 6 days and was called for follow-up after 2 weeks with the histopathology report. On the follow-up visit, the patient was doing well. The wound had normally healed. He was pain-free, tolerating orally and passing stools. The chest and abdomen were normal on examination. Histopathology of the specimen revealed mesenteric vascular malformation with osseous metaplasia.

## DISCUSSION

The initial diagnosis in this patient was phytobezoar leading to mechanical obstruction. Various vegetable matter such as pumpkin, grape skin, prune, and persimmons cause phytobezoar as it contains a large amount of non-digestible fibers. In this case, vomiting, with one episode of bilious vomiting, constipation, fever, radio-opaque shadow on the plain abdominal radiograph, and no im-

---

Correspondence

**Dr. Amjad Ali**

Department of Pediatric Surgery, Medical Teaching Institute, Khyber Teaching Hospital, Peshawar, Pakistan

**Email:** adaali65@yahoo.com

**Cell:** +92-317-9510822

**Date Received:** 16-09-2022

**Date Revised:** 24-12-2022

**Date Accepted:** 24-12-2022

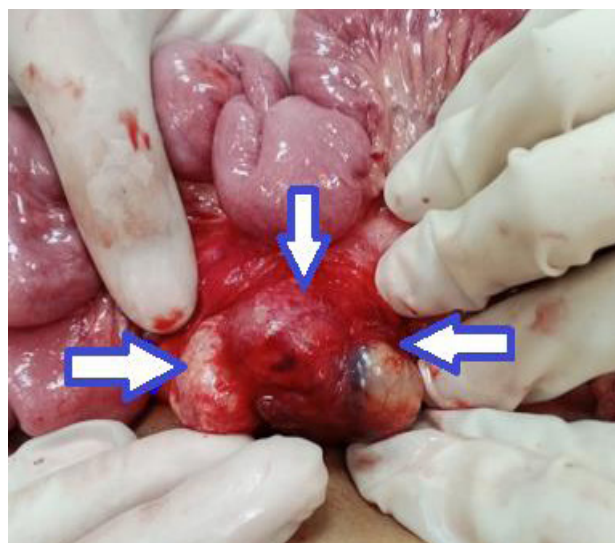
---



**Fig 1:: Plain Abdominal Radiograph showing a Round Radio-opaque Shadow**



**Fig 2: Lateral view plain xray film showing Radio-opaque shadow separate from Spine**



**Fig 3: Intraoperative image showing mass/VM.**

provement with conservative management led to the belief that this was a case of phytobezoar, although there was no history of ingestion of common edibles leading to phytobezoar and the x-ray abdomen did not show any signs of obstruction. Other differential diagnoses, in this case, were worms obstruction and retroperitoneal teratoma.

A very similar case was reported by Thambidorai and colleagues where a female child aged 4 years was seen at the clinic with the signs and symptoms of acute appendicitis <sup>6</sup>.

A Lanz incision laparotomy was carried out for appendicitis and intra-operatively, a mass was found near the right kidney. The mass was suspected to be a renal tumor with retroperitoneal extension or a solitary retroperitoneal neoplasm.

An appendectomy was done, and the patient was advised to consult a surgical oncologist. Upon recovery and stabilization, the patient was re-explored and the mass was excised. The histopathology of the specimen revealed a solitary mesenteric VA that could not be differentiated into low-flow VMs or a regressing hemangioma <sup>6</sup>.

This shows the spectrum of varied presentation, misdiagnosis, and improper management, leading to morbidity and economic burden on the patient and health system. This also warrants a thorough search for rare diseases in cases where history is suggestive and laboratory investigation or radiology shows abnormal findings.

## REFERENCES

1. Fishman SJ, Mulliken JB: Hemangiomas and vascular malformations of infancy and childhood. *Pediatric Clinics of North America*. 1993, 40:1177-200. 10.1016/s0031-3955(16)38656-4
2. Jackson IT, Carreño R, Potparic Z, Hussain K: Hemangiomas, vascular malformations, and lymphovenous malformations: classification and methods of treatment. *Plastic and reconstructive surgery*. 1993, 1:1216-30. 10.1097/00006534-199306000-00006
3. Tchofo PJ, Damry N, Van Wilder F, Avni FE: Mesenteric capillary hemangioma in a 4-month-old girl. *European Journal of Radiology Extra*. 2004, 1:121-4. 10.1016/j.ejrex.2004.05.008
4. Chateil JF, Saragne-Feuga C, Pérel Y, Brun M, Neuenchwander S, Vergnes P, Diard F: Capillary haemangioma of the greater omentum in a 5-month-old female infant: a case report. *Pediatric radiology*. 2000, 30:837-9. 10.1007/s002470000352
5. Jameel A, Amin A, Arif H, Amjad K: Percutaneous coil embolization of congenital hepatic arteriovenous malformations in two patients with congenital heart disease and review of the literature. *Health*. 2010, 2:906-912. 10.4236/health.2010.28134
6. Thambidorai CR, Wahab A, Hamzaini AH: Solitary mesenteric vascular anomaly presenting as acute abdomen. *J Indian Assoc Pediatr Surg*. 2008, 13:115-7. 10.4103/0971-9261.43820
7. Israel PG, Armstrong BE, Effman EL, Newman GE, Anderson PA: Retroperitoneal arteriovenous malformation, a rare cause of heart failure in infancy: consideration of therapeutic approaches. *Pediatr Cardiol*. 1993, 14:49-52. 10.1007/BF00794847



This Work is Licensed Under A Creative Commons Attribution Non Commercial-NoDerivatives 4.0 International License.