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A rare case of adult infected omphalomesenteric cyst with gastric mucosa and appendicitis- A diagnostic challenge

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ABSTRACT

19 year old male presented with features of intestinal obstruction and acute appendicitis. After inducing anaesthesia for surgery a lump was palpable around the umbilicus. Laparatomy showed a well circumscribed, cystic swelling with central area of necrosis in the posterior aspect of anterior abdominal wall around the umbilicus. Most of the Intestine throughout the length was normal and appendix was grossly inflamed. There was no band or connection from the swelling to the intestines. Entire swelling was excised along with the surrounding normal tissue and was sent for histopathology, which revealed the swelling as a remanant of omphalomesenteric duct.

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Figure 1
Its showing mass attached to the abdominal wall

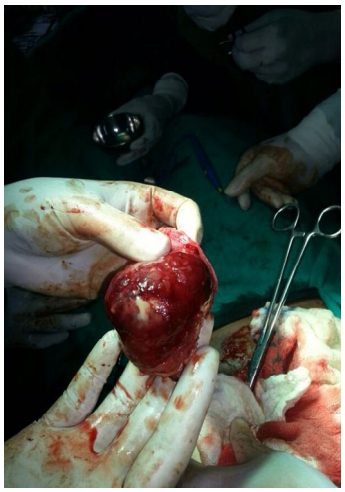

Figure 2
Mass is excised from the abdominal wall

1. INTRODUCTION

During fetal life, the midgut communicates with yolk sac by the omphalomesenteric duct (Oxford textbook of surgery, 2nd edition, vol 2, pg. 1375). As the abdominal wall develops, the omphalomesenteric duct becomes narrow and gets absorbed within the abdominal wall. Sometimes a part or whole of it may persist and gives rise to abnormalities. Persistence of the intestinal end of the omphalomesenteric duct results in Meckel's diverticulum. Rarely ectopic gastric tissue can be seen in such a diverticulum and gives rise to gastrointestinal bleeding. Omphalomesenteric duct may remain patent as a fistula between the small intestine and umbilicus or as an umbilical polyp which has to be differentiated from umbilical granuloma. It may also result in umbilical sinuses. Accumulation of the mucus in a portion of the duct may result in the formation of a cyst which may be associated with ectopic gastric tissue or it may present as a fibrous band (Sabiston textbook of surgery, pg. 1177; Ravitch et al. 1979).

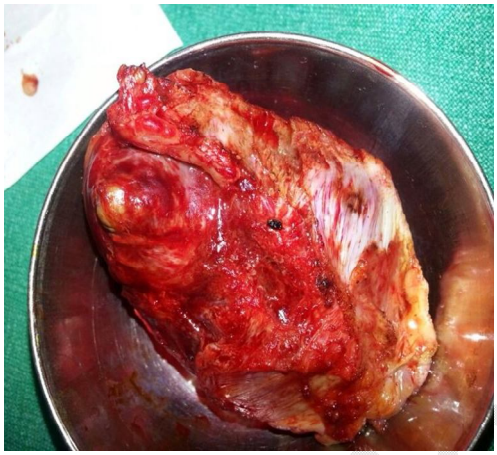

Figure 3
It's showing excised specimen.

Figure 4
It's showing the cut section of the specimen

2. CASE SUMMARY

A 19 year old male presented with pain abdomen and signs and symptoms suggestive of intestinal obstruction. X ray abdomen showed distended bowel loops across the length. Patient had high grade fever with chills and had no vomiting. Patient was under observation, after 6-8 hours he complained of pain in right lower abdomen and around umbilicus. Ultrasound was done which was suggestive of acute appendicitis. After induction of anaesthesia, a lump of 5x8 cms was palpable around the umbilicus. There was no abnormality of the umbilicus. Insignificant past history. Midline laparotomy incision was taken and a circumscribed swelling with central area of necrosis was seen which was sealed off from the abdominal cavity by omentum (Figure 1). Intestines were bulky with normal texture. There were no bands or connections with the small bowel. The entire swelling along with the surrounding normal tissue was excised in toto (Figures 2 & 3) and sent for histopathology. Appendicectomy done as the appendix was inflamed and sent for histopathology. Post op patient developed wound infection and gaping of the wound at the umbilicus which was treated by antibiotics after culture and sensitivity and gaping of the wound was managed by secondary suturing. Enclosed (Figure 4) cut section of the specimen.

3. DISCUSSION

The remanants of the omphalomesenteric (vitellointestinal) duct may present as abnormalities related to the abdominal wall. In the fetus, the omphalomesenteric duct connects the fetal midgut to the yolk sac (Michael et al. pg. 1143). This normally is obliterated and disappears completely. However any or the entire fetal duct my persists and give rise to symptoms.it can also be detected in antenatal period by ultrasound (Mccalla et al. 1995). An umbilical polyp is small excrescences of omphalomesenteric duct mucosa that is retained in the umbilicus and resembles like umbilical granulomas and do not disappear after silver nitrate cauterisation. Umbilical sinuses results from the continued presence of the umbilical end of omphalomesenteric duct. The treatment is excision of the sinus. It can also persist as an umbilical nodule (Hataya et al. 1989). Persistence of the entire omphalomesenteric duct gives rise to passage of enteric contents from the umbilicus (Sanchez- Castellanos et al. 2006).

This is seen in neonatal period and should be treated by excision of the duct to avoid intussusception or volvulus. Cystic remnants of the omphalomesenteric duct may persist and be asymptomatic for a long time. The cyst may be

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connected to the ileum (Bolognia et al. 2007) with a fibrous band and the patient may present with acute intestinal obstruction or acute abdomen because of cyst infection. The cyst usually remains undiagnosed until the operation, at which time they should be excised. Meckel's diverticulum (Moore et al. 1996) results when the intestinal end of the omphalomesenteric duct persists. This is a true diverticulum with all the layers of intestinal wall. It may or may not be symptomatic (Russell et al. pg.1158) Treatment consists of excision of the cyst or any part of the persistent omphalomesenteric duct.

4. CONCLUSION

This is a rare case of infected adult omphalomesenteric cyst with gastric mucosa and complicated by appendicitis with features suggestive of intestinal obstruction. With varied signs and symptomatology and unclear diagnostic findings patient was taken up for laparotomy. After the incision we were surprised to see that a cystic swelling at the posterior aspect of anterior abdominal wall which was well separated by the omentum from the intestines. The whole length of the intestine was searched for any bands or connection to the swelling or for the meckel's diverticulum. As the appendix was inflamed, appendicectomy done. With such a complicated and varied presentation it was a challenge for our surgical team to come to a conclusive diagnosis before opening the abdomen. And after referring various literature we were surprised to find omphalomesenteric cyst in adults is extremely rare and uncommon in children (Vane et al. 1987).

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REFERENCES

1. Bolognia Jean L. et al. 2007. Dermatology. St. Louis: Mosby. 1689, Pp.1681
2. Hataya Y, Matsuo K, Hirose T. Umbilical polyp. *Eur J plast Surg*. 1989, 12, 135-37
3. Maingot's Abdominal Operations, Michael J. Zinner, Seymour I. Schwartz. Harold Ellis, 10th edition; pg. 1143
4. Mccalla CO, Lajinian S, Desouza D et al. Natural history of antenatal omphalomesenteric duct cyst. *J Ultrasound Med*. 1995, 14(8), 639-40
5. Moore TC. Omphalomesenteric duct malformations. *Semin Pediatr Surg*. 1996, 5(2), 116-23
6. Oxford textbook of surgery, 2nd edition, vol 2, pg. 1375
7. Ravitch MM et al. Pediatric surg. 3rd edition, Chicago, year book medical, 1979
8. Russell RCG, Norman S Williams, Christopher JK Bulstrode. Bailey & Love's Short Practice of Surgery. 23rd edition, pg.1158
9. Sabiston textbook of surgery 17th edition, vol 2, pg. 1177
10. Sanchez- Castellanos ME, Sandoval-Trees C, Hernandez-Torres M. Persistence of omphalomesenteric duct. 2006, 97(6), 404-5
11. Vane DW, West KW, Grosfeld JL. Vitellointestinal duct anamolies. *Arch surg*. 1987, 122(5), 542-7

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