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PERSISTENT VITELLOINTESTINAL DUCT WITH DISCHARGING FISTULA WITH RIGHT ECTOPIC KIDNEY ANDLEFT RENAL AGENESISIN 17 YEAR OLD MALE- A CASE REPORT

Dr. Pratik Chaudhari[1] (PG Resident Surgery), **Dr. Ajay Joshi**[3] (Head &Professor Dept of Surgery)
Department of General Surgery, Index Medical College Hospital & Research Centre, Indore[1&3]
Department of Pathology, Index Medical College Hospital & Research Centre, Indore[2&4]
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Corresponding author: Dr. Ajay Joshi

Introduction

Early in fetal life, the intestines i.e. midgut communicates with the yolk sac which is long narrow tube.[1] Generally, the duct fully obliterates (narrow and disappear) at 7mm stage and forms a fibrous cord connecting the umbilicus and the bowel. Its failure to become obliterated accounts for various types of vitelline duct abnormalities which occurs in 2% of population.[2] A persistent vitellointestinal duct can induce abdominal pain, bowel obstruction, intestinal hemorrhage and umbilical sinus, fistula or hernia which commonly occurs in children.[3]

We have reported an extremely uncommon case of Persistent Vitellointestinal Ductwith Right ectopic kidney and Left renal agenesis in an adult patient.Patient undergone Mini exploratory laparotomy with excision of umbilical growth and specimen was send for histopathological examination.[4]

Clinical Presentationofcase: A 17-year-old male came to surgery OPD, with complaints of mass protruding from his umbilical area since birth. There was history of inflammation, redness, itching in paraumbilical region. On examination, mucous discharge was present from the mass along with on and off bleeding present. There was no significant family history.

On examination there was fleshy red umbilical swelling of size 4 x 3 cm with active mucous discharge. Rest of the examination was normal.

USG- finding most likely suggestive of Umbilical Granuloma right ectopic kidney and Left renal agenesis.

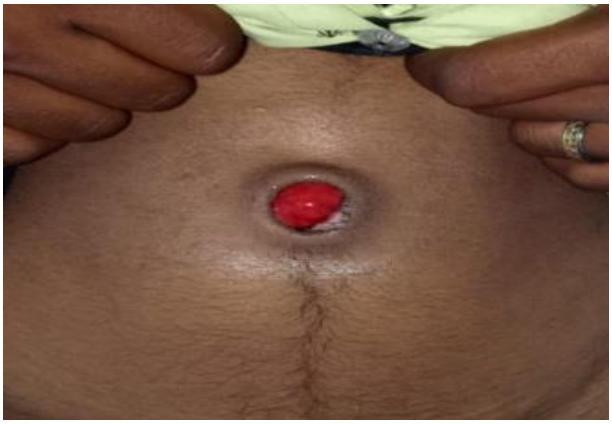

Figure 1: Clinical presentation of patient in surgical OPD

CECT ABDOMEN & PELVIS (PLAIN + CONTRAST)

CECT of whole abdomen has been performed using oral and I/V contrast.

Findings:

Approx at least 8 cm long length of tubular structure is noted, which is extending from umbilicus to fundal part of urinary bladder with traction of bladder at attachment.

Bilateral renal fossas are empty. Right kidney is 9.6x4.2 cm in size, noted in pelvis just superior to bladder. Left kidney is not visualized.

Bowel loops are adequately opacified with gastrograffin and are normal in position. The rectum sigmoid and prerectal space appears normal. Both ischio-rectal fossa appear normal. Stomach is adequately opacified with gastrograffin and is normal in position.

Surgical Procedure:

Mini Exploratory Laparotomy with Excision of Granuloma. Under all aseptic precaution painting & draping done. Paramedial incision given. Umbilical Dissection done around the swelling. Swelling

attached to the intestine is cut. Wash done by betadine & Normal saline. Layer by layer closure done. Skin sutured with nylon 3-0. Dressing done under all aseptic precaution.

Histopathology:

Dissected umbilical was received in 10% formalin in the laboratory which was processed and paraffin blocks were prepared. 3-4 micrometer thick sections were prepared from paraffin embedded tissue using rotatory microtome.These sections were stained with haematoxylin and eosin and then studied.

Gross:

Received single container with umbilical growth. Umbilical mass appears fleshy bright red with attached skin flap measuring 4x2.5x2cms & mass measuring 2x1.5x0.8cms. On cut white homogenous area with pale yellow area seen.

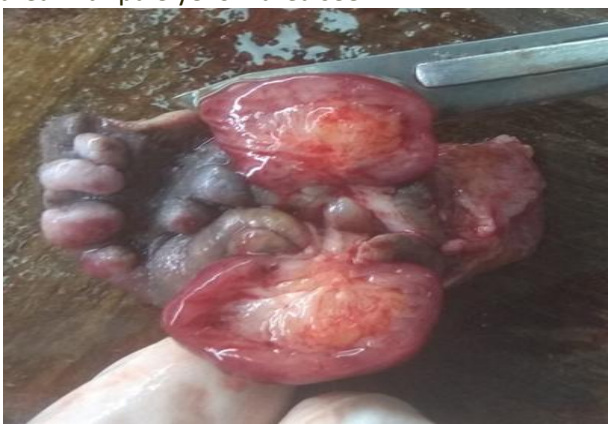

Figure 2: Fleshy bright red Umbilical Growth measuring 2 x 1.5 x 0.8 cms along with attached skin flap

Figure 3: On cut homogenous white with pale yellow area seen.

Microscopic Examination:

Sections studied from the excised tissue show stratified squamous epithelial lining which is in direct continuity with the underlying intestinal mucosa of vitellointestinal duct forming a fistula tract lined by intestinal mucosa which appears denuded at places. Lamina propria consists of intestinal glands lined by cuboidal epithelium & dense mixed inflammatory infiltrate of lymphocytes & plasma cells. Muscular wall is composed of hypertrophied mesenteric plexus with few blood vessels also seen. No Granuloma Seen. Diagnosis was made as Patent Vitellointestinal Duct with Chronic Inflammation.

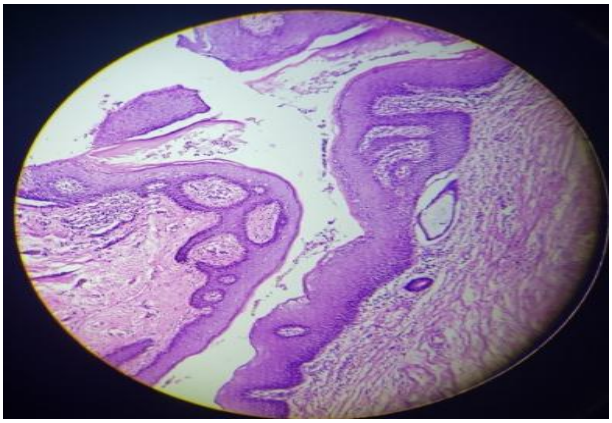

Figure 4: On 4x Power Showing Fistulous tract which is lined by stratified squamous epithelium.

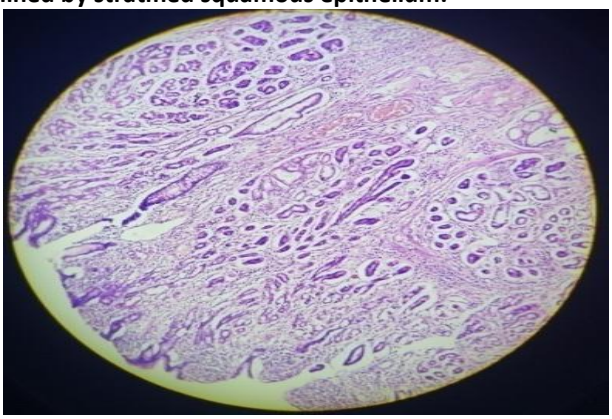

Figure 5: On 4x Showing Intestinal Mucosa which appears denuded at places

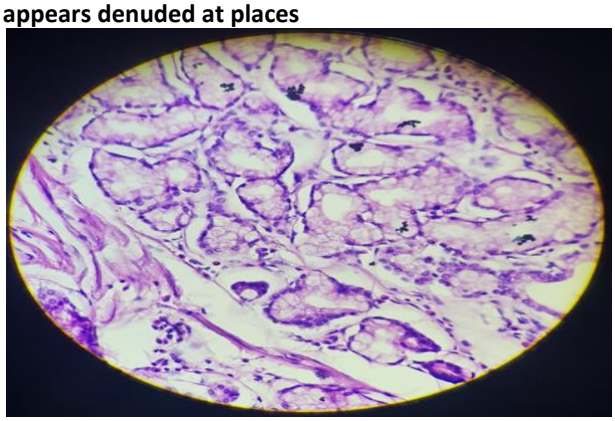

Figure 6: On 40x Intestinal Gland lined by cuboidal epithelium & presence of dense inflammatory infiltrate of lymphocytes and plasma cells

Discussion:

The incidence of a completely patent VID is reported to be 0.0063–0.067%. Of all the anomalies of the VID, complete patency of the

duct is the rarest. The condition is mostly seen either in neonates or in infants.Vitello intestinal duct with fistula formation is rare presentation and mimics with umbilical granuloma. [5]

The treatment of all patent Vitellointestinal ducts is immediate surgery. Attemptsto close the fistula superficially are bound to be futile and are often dangerous. [6] In one of the cases reported by Singer, 20 three quarters of the jejunum, the ileum, the ascending and the descending colon prolapsed and an attempt, before the child was sent to the hospital, to close the fistula superficially by a ligature led to loss of all this bowel. [7]

Patients with umbilical abnormalitieshad in 5/17 prolapse, 5/17 faecal drainage, 4/17 an umbilicalpolypoid mass, and in 3/17 umbilical cord hernias that contained a Meckel's diverticulum. [8] Umbilical cysts as OMDremnants have rarely been reported. The literature review revealed 2 cases of umbilical cysts, one in a 6-year-old childpresenting as an umbilical mass and another in a 2-year old girl presenting as an umbilical nodule. [9]

Conclusion:

The patent Vitellointestinal duct is an uncommon entity in adults and moreover this disorder leading to intestinal obstruction is very rare. However, it is very tough to diagnose clinically.

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