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RESEARCH ARTICLE

ACUTE COLONIC PSEUDO-OBSTRUCTION IN SICKLE CELL DISEASE: A CASE REPORT

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Abstract

Acute colonic pseudo-obstruction is a rare yet an important complication of sickle cell disease to be known as lack of knowledge about it may lead to unnecessary surgical interventions due to its similar presentation of other acute surgical conditions. Here I present a 15 years old boy who has newly discovered to have sickle cell disease presented with pseudo intestinal obstruction and was successfully treated with a combination plan of intestinal obstruction and sickle cell disease.

Introduction:-

Acute colonic pseudo-obstruction (ACPO) also known as Ogilvie syndrome is a rare, acquired disorder characterized by abnormalities affecting the peristalsis within the colon. Was first described in the medical literature in 1948 by a British surgeon named Sir William Ogilvie, most often occurs in hospitalized or institutionalized patients who have an underlying illness or have recently undergone surgery. Common symptoms of Ogilvie syndrome include abdominal pain, bloating, abdominal distention, nausea and vomiting. Some individuals have a history of chronic and sometimes severe constipation. Abdominal distention usually develops over several days, but can potentially develop rapidly within a 24-hour period[(1)].

Case Presentation:-

15 years old male present to pediatric emergency department complains of abdominal pain, vomiting, abdominal distention and absolute constipation (air and feces) for one day. The pain was all over the abdomen, sudden on onset, stabbing in nature, radiate to the lower back, with no nausea, increased by standing as well as walking, relived by lying down, throughout the day with no time preference and severe that prevent patient from sleeping. Vomiting was large in amount, yellow in color, contains food particles, sore, whatever patient ate and not projectile. Abdominal distention was generalized, sudden on onset with no reliving or aggravating factors, with no past medical history of similar condition or chronic illnesses but a history of admission in 2010 with no obvious diagnosis, no history of blood transfusion neither surgical interventions, also no family history of chronic illnesses or similar conditions. Patient was on folic acid and Amoxicillin one month prior to presentation due to low hemoglobin. On physical examination patient was ill, on pain, pale, not jaundiced, afebrile, respiratory rate 32 breath per minute, pulse rate 112 beat per minute with average volume and regular. Abdominal examination reviled distended abdomen with full flanks, no surgical scars, no dilated veins, hernia orifices were intact, soft on palpation, no guarding or rigidity, tenderness at suprapubic, left iliac fossa plus left hypo-chondrium area, liver was not palpable, liver span was 10 cm, spleen was not palpable also kidneys were not bimanual palpable, abdomen was hyper-resonant on percussion all over, negative shifting dullness and absent bowel sounds on osculation. Rectum was empty on per

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rectum examination. His laboratory investigations reveled Hemoglobin: 7.4 g/dl, HCT: 21.2%, MCHC: 34.9 g/dl, MCH: 27.4 pg, MCV: 78.7 fl, Total white blood cell: 33.9 x 10^3 µL, Lymphocyte:13.4%, Granulocytes: 76.9%, Platelets: 255 x10^3. Blood film for malaria was negative but positive by ICT. Serum sodium: 138.8 mEq/L and serum potassium: 3.76 mEq/L. Abdominal ultrasound showed distended bowel with gasses and abdominal x ray showed distended bowel segments with gasses.

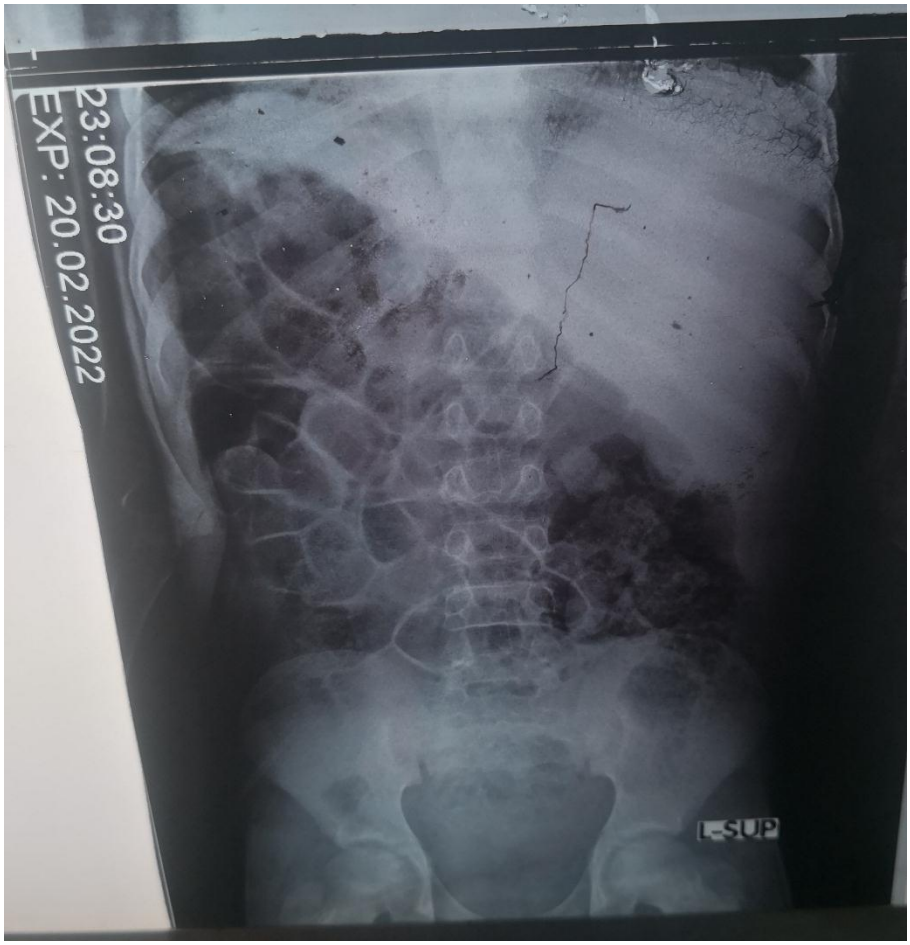

Figure 1:- Plain abdominal x ray showing distended large bowel full of air.

Pediatric surgery department was consulted about this case and surgical abdomen was excluded, sickling test was requested which came positive then peripheral blood picture and hemoglobin electrophoresis were requested to confirm the diagnosis meanwhile patient mange plan was conservative including Nil per mouth, nasogastric tube for suction and decompression was inserted (bright green fluid most likely bile was drawn back at the bag), fluid (maintenance), analgesia (paracetamol IV and Diclofenac sodium IM) and antibiotics (Metronidazole and Ceftriaxone IV). The next day micro enema was given and patient passed air after it immediately then few amount of stool 1 to 2 hours after, fluid were adjusted to one and half maintenance, patient was doing well on follow up and all presented complains and signs resolved then after sickle cell disease diagnosis folic acid tabs were added.

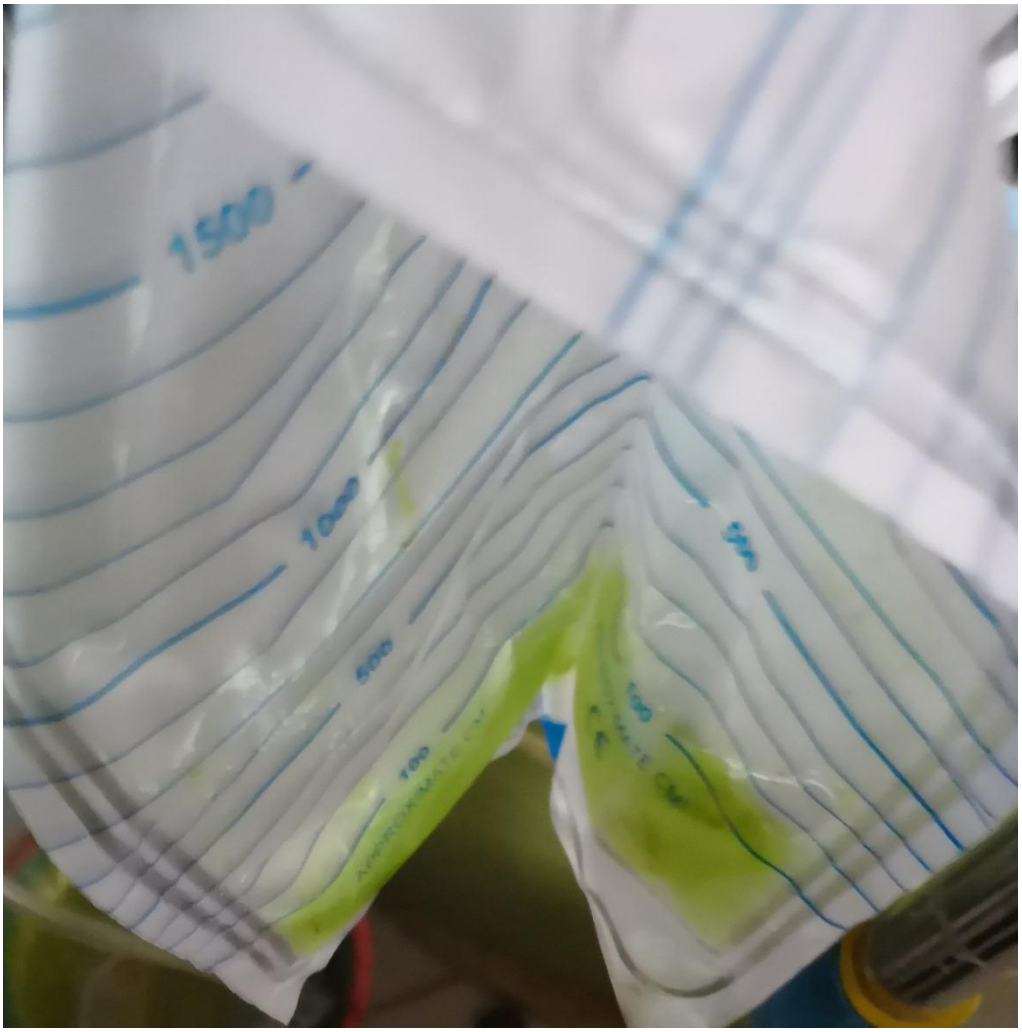

Figure 2:- Bright green fluid most likely bile was drawn back at the nasogastric tube bag.

Discussion:-

This case report highlight the important of recognizing and knowing Ogilvie syndrome in patient known or suspected to have sickle cell disease as it was the leading presentation to diagnosis in this case. A similar case was reported in previously diagnosed patient in 2016 by El Yamani Fouda, Nauman Anwar and others in Armed Forces Hospital Jizan, the patient was 2 years old boy presented complains of one-day history of abdominal pain, mild abdominal distention with constipation, mild shortness of breath and back pain. There was no complaint of vomiting or fever. The patient is a known case of sickle cell disease and had twice presented to pediatric department with vaso-occlusive crises in past. On his examination pulse was 115 beats per minute, respiratory rate 28 per minute, abdomen was soft, distended, non-tender with sluggish bowel sounds. They had mentioned that their case was the second reported case in pediatrics literature so this might be the third one[(2)].

However, the current case differ that the patient wasn't diagnosed before but otherwise presentation was relatively similar. This report limitation may include the poor quality and only one type of imaging as an investigation tool. Our management was different from what suggested at the previous report in which they tried neostigmine as it was reported to be used in adult as second line after conservative therapy, neostigmine increase the parasympathetic tone which suggested to be affected in Ogilvie's syndrome, comparing to this study parasympathetic function wasn't manipulated by any drug rather the management plan was a combination of mechanical obstruction and vaso-occlusive crisis managing plans which showed a good outcome on the first few days of admission. The case is reported in order to get a better understanding and better clinical sense about this syndrome in sickle cell disease patients.

Conclusion:-

Acute colonic pseudo-obstruction in sickle cell disease isn't a common presentation in pediatric patients and this report showed the possible investigation tools and the successful medical management as surgical interventions weren't needed which may help avoiding more morbidity and mortality in such presentation of diagnosed or suspected sickle cell disease patient.

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