

## CASE REPORT

# Intussusception in Pregnancy - A Rarely Considered Diagnosis

*Osime OC<sup>1</sup>, Onakewhor J<sup>2</sup> and Irowa OO<sup>1</sup>*

<sup>1</sup>Department of Surgery, University of Benin Teaching Hospital, Benin City, Nigeria; <sup>2</sup>Department of Obstetrics and Gynaecology, University of Benin Teaching Hospital, Benin City, Nigeria.

\*For correspondence: Email: clementosime@yahoo.com Mobile: 08038780246

## ABSTRACT

Intussusception in pregnancy is rare and making a preoperative diagnosis is extremely difficult. The objective of this paper is to report a case of intussusception in a pregnant woman and to review the literature on the subject with a view to highlighting the peculiarities of this condition. The case file of a 26 year old Gravida 3, Para <sup>0+2</sup> lady who had appendectomy 5 years earlier and now presented at 33 weeks of gestation with features of intestinal obstruction was evaluated. Ultrasound scan showed dilated bowel loops suggestive of intestinal obstruction. At operation, an ileo-ileal intussusception was found without a lead point. Histology of the resected bowel segment showed haemorrhagic infarction without evidence of malignancy. Even though bands and adhesions are the commonest causes of intestinal obstruction in a patient that has had a previous abdominal surgery, possibility of other aetiological factors should always be considered (Afr J Reprod Health 2010; 14[1]:145-148).

## RÉSUMÉ

**Intussusception pendant la grossesse : Un compte rendu.** L'intussusception dans la grossesse est peu commune et le diagnostic préopératoire est extrêmement difficile. Cet article a pour but de rapporter un cas d'intussusception chez une femme enceinte et de passer en revue la littérature sur le sujet en vue de mettre l'accent sur les particularités de cet état. Nous avons évalué le dossier d'une jeune femme de 26 ans (gravide 3, nullipare 0 + 2) qui a eu une appendicectomie cinq ans plus tôt et qui maintenant présente après 33 semaines de gestation, les traits de l'occlusion intestinale. Au cours de l'intervention chirurgicale on a découvert une intussusception iléo-iléale sans point de dérivation. L'histologie du segment de l'intestin résecté a montré l'infarctus hémorragique sans l'évidence de la malignité. Bien que les brides et les adhésions constituent les causes les plus communes de l'occlusion intestinale chez une patiente qui ont déjà subi une intervention chirurgicale, il faut considérer la possibilité d'autres facteurs étiologiques (Afr J Reprod Health 2010; 14[1]:145-148).

---

KEYWORDS: Intussusception, Pregnancy, Previous abdominal surgery, difficult diagnosis.

---

## Introduction

Intestinal obstruction complicating pregnancy is one of the surgical emergencies that are associated with high incidence of morbidity and mortality for both mother and fetus.<sup>1,2</sup> Intestinal obstruction occurring during pregnancy is very

rare.<sup>1</sup> The incidence of intestinal obstruction in pregnancy is put by some studies at between 1: 1,500 and 1: 66, 431 deliveries, while others put it at one in every 2,500 – 3,500 deliveries.<sup>3,4</sup> Intussusception is largely a disease of children with only about 5% of all cases of intussusception occurring in adults.<sup>1</sup> Intussusception (invagination of one part of the bowel into another) is a

## *Intussusception in Pregnancy*

very rare cause of intestinal obstruction during pregnancy being responsible for only about 5% of cases; whereas volvulus accounts for 24% and intraabdominal adhesives account for 58% of cases of intestinal obstruction occurring during pregnancy. In Chiedozie et al's study at the University of Benin Teaching Hospital, out of the ten cases of intestinal obstruction in pregnancy, there were three cases of intussusception.<sup>5</sup>

Making a diagnosis of intestinal obstruction during pregnancy is particularly difficult because most of the symptoms of intestinal obstruction (anorexia, nausea, vomiting and abdominal pain) are often encountered during pregnancy. In addition, because of the fear of irradiation vis' a'vis the fetus, routine plain abdominal X rays ( a very useful tool in making a diagnosis of intestinal obstruction) are rarely used during pregnancy.<sup>5</sup> pregnancy as being symptoms of pregnancy.

### **CASE REPORT**

Mrs OA is a 26 year old Gravida 3 Para 0+2, who presented at 30 weeks of gestation with complaints of abdominal pain, vomiting, constipation and anorexia, all of 4 days duration. The abdominal pain which was mainly in the upper abdomen was colicky in nature. The patient vomited on the average of 4-5 times per day and the vomiting was projectile. A day prior to onset of symptoms, the patient had frequent (6 times) passage of watery stools. She had appendectomy 5 years earlier. The significant findings on examination were a distended abdomen associated with marked epigastric tenderness. The fundal height was estimated to be at 32 weeks. No other mass was palpable. The bowel sounds were exaggerated. The digital rectal examination showed an empty rectum. The vital signs were essentially normal. An impression of intestinal obstruction possibly secondary to bands and adhesions was made. Patient was managed conservatively with a nasogastric tube, nothing by mouth and intravenous fluid. The symptoms resolved after three days as evidenced by passage of faeces, absence of vomiting and markedly reduced abdominal pain. She was then commenced on oral intake. However, two days

after the commencement of oral intake, the symptoms recurred again and a decision for operative management was made. Finding at operation was ileo-ileal intussusception about 40cm from ileo-caecal junction and about 20cm of the intussusceptum was gangrenous. No definite lead point was identified. There were multiple mesenteric lymph nodes. The patient subsequently had ileal resection with end to end anastomosis. The patient had an uneventful post operative period and the stitches were removed on the 10<sup>th</sup> post operative day. The histology of the excised bowel segment showed haemorrhagic infarction without evidence of malignancy. On the 16<sup>th</sup> post operative day, the patient started to complain of colicky abdominal pain and later that day she ruptured the amniotic membrane and a Specifically, making a diagnosis of intussusception in adults is equally tasking because the classical paediatric triad of intussusception (acute abdominal pain, palpable sausage shaped mass and "red currant jelly" stools) is seldom observed in adults. The implication of these is that that there is often a delay in making a diagnosis of intestinal obstruction in pregnancy and such delay is even worse making a diagnosis of intussusception in pregnancy.<sup>6</sup>

We present a 26 year old Gravida 3, Para 0+2 lady at 30weeks gestation who presented with features of intestinal obstruction. The correct diagnosis of intussusception could only be made intraoperatively. The purpose of this report is to highlight the diagnostic difficulties in making a diagnosis of intestinal obstruction (particularly intussusception) during pregnancy with a view to sensitizing physicians to have a high index of suspicion about this condition and not to attribute all symptoms of anorexia, nausea, vomiting and abdominal pain occurring during decision for an emergency caesarean section was taken. Findings at operation were a live female infant at 32 weeks and few flimsy adhesions between bowel loops. She had adhesiolysis. The baby was clinically stable. The patient had an uneventful post operative condition and stitches were removed on the 10<sup>th</sup> post operative day.

## **Discussion**

Intestinal obstruction complicating pregnancy is an uncommon but serious disorder with significant maternal and fetal morbidity and mortality.<sup>1,2</sup> Shenhav et al<sup>3</sup> reported only one case of intestinal obstruction in 4,399 deliveries while Perdue et al<sup>4</sup> reported an incidence of one in 1,500 to one in 66,431 deliveries. Other studies have similarly reported the rarity of intestinal obstruction in pregnancy.<sup>7,8</sup> Most cases of intestinal obstruction in pregnancy present during the 3<sup>rd</sup> trimester.<sup>5,9</sup> Our patient presented in the third trimester. Seven of the ten patients presented by Chiedozi et al presented in the 3<sup>rd</sup> trimester.<sup>5</sup> Other studies have reported similar findings. Because most of the symptoms of intestinal obstruction are similar to some signs and symptoms of pregnancy, there is often a delay in making a diagnosis of intestinal obstruction in pregnancy and in some instances, there is significant morbidity and mortality.<sup>5</sup> Another reason for delay in making a diagnosis of intestinal obstruction in pregnancy is that the conventional investigative tool (Plain abdominal x ray) for making a diagnosis of intestinal obstruction is oftentimes not used in pregnancy. During pregnancy, the symptoms of nausea and vomiting occur mostly in the 1<sup>st</sup> trimester. On the other hand, intestinal obstruction in pregnancy occurs mostly in the 3<sup>rd</sup> trimester. Thus even though some of the symptoms may be similar, using the gestational period may be helpful in distinguishing the features of early pregnancy from the features of intestinal obstruction.<sup>5</sup> In the present case, it took about four days before a diagnosis of intestinal obstruction was considered. A high index of suspicion and adequate clinical assessment will aid in making an earlier diagnosis of intestinal obstruction in pregnancy. Also, studies have shown that the use of x-rays in pregnancy does not pose a significantly greater risk to the fetus than the risk of missing the diagnosis of intestinal obstruction with the attendant consequences.<sup>5,10</sup> Thus when intestinal obstruction is suspected in pregnancy, in the appropriate setting, a plain abdominal radiograph can be used to make an early diagnosis.

Intussusception is primarily a disease of children with only about 5% of cases occurring in adults. Diagnosis can be delayed because of its longstanding, intermittent and non-specific symptoms and most cases are diagnosed at emergency laparotomy. One of the ways of making a diagnosis of intussusception during physical examination of the abdomen is by palpating a tender, firm sausage shaped mass in the abdomen in a patient that presents with features of acute intestinal obstruction.<sup>1,6</sup> However, in a woman with a gravid uterus and especially at advanced stage of gestation, it may not be possible to palpate a mass per abdomen. Our patient presented at 32 weeks of gestation and a mass was not palpated per abdomen. In Abdul et al's report, the patient presented at a gestational age of 12 weeks and they were able to palpate a mass per abdomen.<sup>11</sup> Other studies have also reported similar findings. Ultrasound scan is one of the ways of making a diagnosis of intussusception.<sup>12,13</sup> This may however also depend on the sonologist.<sup>14</sup> In the case we presented, the use of ultrasound did not confirm the diagnosis of intussusception.

Bands and adhesions are the commonest causes of small bowel obstruction especially in patients that have had previous abdominal surgeries.<sup>15</sup> In Chiedozi et al's series at the University of Benin Teaching Hospital, five of the ten patients had adhesive bands while three patients had intestinal obstruction due to intussusception.<sup>5</sup> Our patient had appendectomy 5 years earlier and an impression of intestinal obstruction secondary to bands and adhesions was made and hence the use of conservative management for 4 days. Thus while bands and adhesions may be the commonest cause of intestinal obstruction in patients that have had previous abdominal surgeries, the possibility of other causes of intestinal obstruction must always be considered.

Intussusception in children is usually characterized by the absence of leading point for the intussusception, whereas in adults, there is usually a leading point for the intussusception.<sup>16,17</sup> The absence of a leading point in adult intussusception is found only in about 5%.<sup>16,17</sup> In Chiedozi et al's study, two of the three patients

## *Intussusception in Pregnancy*

that had intussusception did not have any leading point.<sup>5</sup> Other studies have reported similar findings.<sup>18,19</sup> Similarly, we did not find a leading point in our patient. The histology report only showed haemorrhagic infarction without evidence of malignancy. This is similar to findings from other reports.<sup>18,19</sup>

In conclusion, there is usually a considerable delay in arriving at a diagnosis of intestinal obstruction in pregnancy with resultant increased morbidity and mortality. In seeking to avoid the delay and the attendant consequences, and considering the fact that intestinal obstruction in pregnancy is so uncommon, it is suggested that a high index of suspicion, early resort to radiological examination in the appropriate clinical setting and adherence to standard therapeutic principles should be the overall guiding principles.

## **References**

1. Amias AG. Abdominal pain in pregnancy. In: Tumbal A, Chamberlain G (eds) *Obstetrics*. Churchill Livingstone, Edinburgh. 1989; 613-615.
2. Davis MR, Bohon CJ. Intestinal obstruction in pregnancy. *Clin Obstet Gynecol* 1983; 26: 832-842.
3. Shenhav S, Gemer O, Segal S, Linova L, Joffe B. Preoperative diagnosis of intestinal intussusception in pregnancy: a case report. *J Reprod Med* 2000; 45: 501-3.
4. Perdue Pw, Johnson HW, Stafford PW. Intestinal obstruction complicating pregnancy. *Am J Surg* 1992; 164: 384-8.
5. Chiedozi LC, Ajabor L, Iweze F. Small intestinal obstruction in pregnancy and puerperium. *Saudi J Gastroenterol* 1999; 5: 134-9.
6. Khan MN, Agrawal A, Strauss P. Ileocolic intussusception- A rare cause of acute intestinal obstruction in adults; case report and literature review. *World J Emerg Surg* 2008; 3: 26-31.
7. Choi SA, Park SJ, Lee HK, Yi BH, Kim HC. Preoperative diagnosis of small bowel obstruction in pregnancy with the use of sonography. *J Ultrasound Med* 2005; 24: 1575-7.
8. Watson R, Quayle AR. Intussusception in pregnancy: case report and a review of the literature. *BROG* 2005; 93: 1093-6.
9. Dunselman GAJ. Intestinal obstruction in pregnancy. *Trop Doct* 1983; 13: 174-7.
10. Martin RH, Perry KG, Morrison J. Surgical diseases and disorders in pregnancy. In: De Chemey AH, Pemoll ML, (eds), *Current Obstetrics and Gynecology Diagnosis and Treatment*, 2<sup>nd</sup> ed. Appleton and Lange Norwalk 1994; 493.
11. Abdul MA, Yusuf LM, Haggai D. Intussusception in pregnancy- report of a case. *Nig J Surg Res* 2004; 6: 61-3.
12. Mayer I, Hussain H. Abdominal pain during pregnancy. *Gastroenterology Clinics of North America*. 1988; 27: 1-36.
13. Gurbulak B, Kabul E, Dural C, Citalak G, Yanar H, Gullouglu M, Taviloglu K. Heterotropic Pancreas as a leading point for small bowel intussusception in a pregnant woman. *J Pancreas (online)* 2007; 8: 584-7.
14. Penney D, Ganapathy R, Jonas-Obichere M, El-Refeay H. Intussusception: a rare cause of abdominal in pregnancy. *Ultrasound in Obstetrics and Gynaecology: the official journal of the International society of Ultrasound in Obstetrics and Gynecology*. 2006; 28: 723-5.
15. Osime OC, Okobia MN, Osime U. The changing pattern of intestinal obstruction. *Nig J Surg Sci* 2002; 12: 5-8.
16. Felix EL, Cohen MH, Bernstein AD, Schwartz JH. Adult intussusception: case report of recurrent intussusception and review of the literature. *Am J Surg* 1976; 131: 758-61.
17. Manouras A, Lagoudianakis EE, Dardamnis D, Tsekouras DK, Markogiannakis H, Genetzakis M, et al. Lipoma induced jejunojejunal intussusception. *World J Gastroenterol* 2007; 13: 3641-4.
18. Bond MR, Roberts JBM. Intussusception in the adult. *Br J Surg* 2005; 11: 818-825.
19. Warshauer DM, Le JKT. Adult intussusception detected at CT or Magnetic Resonance Imaging: clinical-imaging correlation. *Radiology* 1999; 212: 853-60.