

# Primary jejunal intussusception in pregnancy: a rare case report

## *Gebelikte primer jejunal intussepsiyon: nadir bir olgu sunumu*

Ayşe Gül Özyapı<sup>1</sup>, Bülent Kars<sup>1</sup>, Bahar Ergen<sup>1</sup>, Esra Esim Büyükbayrak<sup>1</sup>, Orhan Ünal<sup>1</sup>, Mehmet Cem Turan<sup>1</sup>, Necmi Kurt<sup>2</sup>

<sup>1</sup>Dr. Lütfi Kırdar Kartal Education and Research Hospital, Clinic of Obstetrics and Gynecology, Istanbul, Turkey

<sup>2</sup>Dr. Lütfi Kırdar Kartal Education and Research Hospital, 3. Clinic of General Surgery, Istanbul, Turkey

### *Abstract*

Intussusception in pregnancy is a rare condition. In adults more than 90% of cases a lead point can be identified causing the intussusception. Primary intussusception is defined as intussusception that occur without a lead point and it is very rare in pregnancy. It is very difficult to diagnose intussusception during pregnancy. We report a case of jejunal intussusception diagnosed at 33 weeks of gestation managed with the general surgery team and delivered at 34th weeks of gestation due to intraabdominal infection and preterm onset of labour.

(J Turkish-German Gynecol Assoc 2009; 10: 120-1)

**Key words:** Primary intussusception, pregnancy, invagination

**Received:** 30 January, 2009 **Accepted:** 23 March, 2009

### *Özet*

İntussepsiyon gebelikte nadir görülen bir durumdur. Erişkin olguların %90'undan fazlasında intussepsiyona sebep olan alta yatan başlatıcı bir patoloji mevcuttur. Primer intussepsiyon başlatıcı bir patoloji olmadan ortaya çıkan intussepsiyondur ve gebelikte çok nadir görülür. Gebelikte intussepsiyon tanısını koymak oldukça güçtür. Biz gebeliğin 33. haftasında jejunal intussepsiyon tanısı alan, genel cerrahi ekibi ile birlikte yönetilen ve gebeliğin 34. haftasında batıniçi enfeksiyon ve preterm doğum nedeniyle doğumu gerçekleştirilen bir vakayı sunuyoruz.

(J Turkish-German Gynecol Assoc 2009; 10: 120-1)

**Anahtar kelimeler:** Primer intussepsiyon, gebelik, invajinasyon

**Geliş Tarihi:** 30 Ocak 2009 **Kabul Tarihi:** 23 Mart 2009

### **Introduction**

An intussusception is defined as a section of bowel telescoping into another section of bowel. Primary intussusception is defined as intussusception that occur without a lead point and it is very rare in pregnancy. Intussusception in pregnancy is a rare condition. It's very difficult to diagnose intussusception during pregnancy. In adults more than 90% of cases a lead point can be identified causing the intussusception (1). The clinical presentation of adult intussusception varies considerably. The most common presenting symptoms are abdominal pain, nausea, and emesis in acute presentation, seen in only 20% of intussusception cases. Because of the variability in clinical presentation and the impreciseness of diagnostic imaging, most of the time, the diagnosis can be made only at the time of laparotomy.

### **Case**

A 37 year-old pregnant woman, whose gravidity is 6, parity is 5 was admitted to the Dr. Lütfi Kırdar Kartal Education and Research Hospital obstetrical emergency unit with acute onset of abdominal pain. Her body temperature was 36,5 C, pulse rate 88/min and blood pressure was 125/70 mmHg on admission. She was 33 weeks old pregnant and had abdominal tenderness and colicky pain radiated to upper abdomen for two days.

She had nausea and vomiting for three days. She was unable to tolerate food or liquid intake for two days. There had been no change in bowel habits. There were no urinary symptoms. She had no antenatal follow-up during this pregnancy but her previous pregnancies had been learnt to be uncomplicated. There was no significant medical history. She had four previous vaginal delivery history and one cesarean section ten years ago. She had no any other operation history.

In the abdominal examination, she had upper abdominal tenderness and defense without rebound tenderness. Bowel sounds were hyperactive. In the obstetric examination, there were no palpable uterine contractions, the cervix was uneffaced and cervical os was 1-2 cm dilated. Obstetric sonography revealed a 33 weeks of single live intrauterine pregnancy, placenta was fundal and normal in appearance. Amniotic fluid index was normal. Cardio-tocograph was reactive with irregular uterine activity. Liver function tests, serum urea, electrolytes, creatinine and bilirubine levels were normal. A complete blood count revealed iron deficiency anemia with hemoglobine 8.1 g/dl, hematocrit 28.2% and white blood cell count 15 800/ul. Urine analysis was normal.

As there were acute abdominal findings and leucocytosis, the patient was consulted to general surgery department. Transabdominal sonography showed dilated, increased peristaltic ileal and jejunal bowel loops. There was free fluid between bowel loops and 34.6 mm hyperechogenic upper abdominal mass (Picture 1) suspected as target sign of intussusception.

The general surgery team planned an emergent laparotomy and the patient underwent explorative laparotomy via paramedian incision. At the exploration, there was 2000 cc free fluid in the abdomen and 10 cm jejunal invagination. The invaginated bowel loops were necrotic and not easily reducible. About 30 cm of small bowel was resected and anastomosis was performed. Appendix was normal. A drainage tube was placed onto the anastomosis site.

Histopathological examination of the specimen revealed invaginated jejunal bowel loops with hemorrhagic infarct, there was no lead point causing the intussusception.

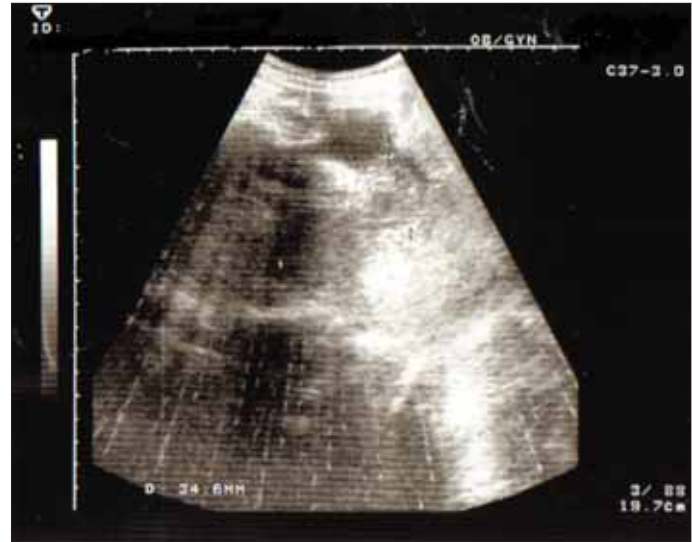
After the operation antibiotics, intravenous fluid, antiemetic treatment, intravenous paracetamol and nifedipine for tocolysis were given. Betamethasone 12 mg intramuscular injection was applied to enhance fetal lung maturation. The patient was followed at the surgery clinic and one week after the operation the patient had fever and acute abdominal pain with vomiting and nausea again. There were contractions in cardio-tocograph. Ultrasonography showed 34 weeks old live fetus. In the abdominal examination there was defense and rebound tenderness all around the abdomen. Another invagination or anastomosis leakage were thought as presumptive diagnosis. The patient underwent relaparotomy by both general surgery and obstetric surgery team. There was intraabdominal infection, and dilated bowel loops behind the anastomosis but the anastomosis was still intact. General surgery team did not perform any other surgical intervention. Due to the intraabdominal infection, obstetric team decided to perform an emergent cesarean delivery and a healthy 2480 g baby with Apgar score of 7-8 was delivered. After ten days of intravenous antibiotherapy, she was discharged from the hospital uneventfully. After the delivery, examination and follow-up of the baby was uneventful.

## Discussion

Intussusception is an uncommon cause of intestinal obstruction and more than 95% of cases occur in the pediatric age group (2). Intussusception in adults is a rare pathology and its incidence is around 2-3 per 1000000 per year (3).

In adults more than 90% of cases a lead point can be identified causing the intussusception (1). The lead point is usually a polyp or a tumour and in majority of these cases the tumours are malignant. Primary intussusception is a very rare condition. The classical triad of abdominal pain, sausage shaped palpable mass and passage of red current jelly stools seen in children is rarely observed in adults (4). The clinical presentation of adult intussusception varies considerably. The most common presenting symptoms are abdominal pain, nausea, and emesis in the acute presentation, seen in only 20% of intussusception (5). Other findings are fever, constipation, diarrhea, bleeding, and abdominal distention. Common physical findings include abdominal distention, decreased or absent bowel sounds, guaiac-positive stool, and abdominal mass. In our case, abdominal pain, nausea and emesis symptoms were compatible with the literature but hyperactive bowel sound was uncompatible.

Ultrasonography has been used to evaluate suspected invagination. The classic features include the target and doughnut sign on transverse view and the pseudokidney sign in the longitudinal view (6). In our case, there was free fluid between bowel loops and 34.6 mm hyperechogenic upper abdominal mass suspected as target sign (Figure 1).



**Figure 1.** Target sign, in abdominal ultrasonography of the patient prior to surgery

It's very difficult to diagnose intussusception during pregnancy. Displacement of the bowel by the uterus makes examination and diagnosis difficult. In the diagnosis of intussusception during pregnancy ultrasound is a safe and available modality. Magnetic Resonance Imaging (MRI) has the advantage over ultrasound and computed tomography because of better anatomical delineation. MRI also has the advantage of being safer in pregnancy, although cost limitations and unavailability make it unsuitable for routine use (5).

In the literature, most of the cases reported in pregnancy were secondary intussusception. As these intussusception cases were secondary to a cause, ultrasonography showed findings of the underlying cause and prediagnosis was mass in the abdomen. The diagnosis was mostly made at the time of laparotomy. There were just two cases of primary intussusception. One of them was diagnosed after delivery via computed tomography.

In conclusion, intussusception in pregnancy is a rare condition. Intussusception can be suspected on the basis of clinical presentation and ultrasonographic examination, but still exact diagnosis can be made only by laparotomy. In most of the adult cases, there is an underlying cause but primary intussusception is rare. This is the third case of primary intussusception in pregnancy published in the literature.

## References

1. Erkan N, Hacıyanlı M, Yildirim M, Sayhan H, Vardar E, Polat F. Intussusception in adults: An unusual and challenging condition for surgeons. *Int J Colorectal Dis* 2005; 20: 452-6.
2. Tan KY, Tan SM, Tan AG, Chen CY, Chng HS, Hoe MN. Adult intussusception: experience in Singapore. *ANZ J Surg* 2003; 73: 1044-7.
3. Dener C, Bozoklu S, Bozoklu A, Ozdemir A. Adult intussusception due to a malignant polyp: a case report. *Am Surg* 2001; 67: 351-3.
4. Azar T, Berger DL. Adult intussusception. *Annals of Surg* 1997; 226: 134-8.
5. Warshauer DM, Lee JK. Adult intussusception detected at CT or MR imaging: clinical-imaging correlation. *Radiology* 1999; 212: 853-60.
6. Weissberg DL, Scheible W, Leopold GR. Ultrasonographic appearance of adult intussusception. *Radiology* 1977; 124: 791-2.