Unusual Anatomic Variation of Ovarian Ligament: Can It Be a Cause of Chronic Abdominal Pain During Pregnancy?

Ligamentum Ovarii Proprium'un Nadir Bir Anatomik Varyasyonu Gebelikte Kronik Abdominal Ağrı Nedeni Olabilir mi?

Gebelikte Kronik Abdominal Ağrı / Chronic Abdominal Pain in Pregnancy

Ali Bahadırlı
Bursa Mustafakemalpaşa Devlet Hastanesi, Bursa, Türkiye

Özet

Gebe hastadaki karın ağrısı bir klinisyene çeşitli tanısal olasılıklarla sevk edilebilir. Sık rastlanılan ama hayatı tehdit edici olabilecek obstetrik, intra-abdominal ve ekstra-abdominal durumların neden olduğu karın ağrısı nedenlerinin saptanması öncelikle gerekli olmasına rağmen, gebe hastadaki karın ağrısıyla ilgili nadir ve atipik olgular da uzman hekimler tarafından akılda tutulmalıdır. Bu vaka sunumunda; gebe bir hastada rastlanılan, over yerine direk olarak ligamentum rotunduma yapışmış olan ligamentum ovarii propriumun neden olduğu kronik abdominal ağrı olgusu anlatılmıştır. Ligamentum ovarii propriumun sıradışı bir anatomik varyasyonu gebelikteki kronik abdominal ağrının ana nedeni olabilir.

Anahtar Kelimeler

Karın Ağrısı; Gebelik; Kronik Ağrı; Ligamentler; Over

Abstract

Abdominal pain in the pregnant patient can be referred to a clinician with a variety of diagnostic possibilities. Although it is essential to determine common but life-threatening obstetric, intra-abdominal and extra-abdominal conditions that may present with abdominal pain, rare and atypical cases of abdominal pain in pregnant patients have to be kept in mind by specialists. In this case report, a pregnant patient who had chronic abdominal pain caused by a proper ovarian ligament which has adhered directly to the round ligament instead of ovary is mentioned. An unusual anatomic variation of proper ovarian ligament can be the main cause of the chronic abdominal pain during pregnancy.

Keywords

Abdominal Pain; Pregnancy; Chronic Pain; Ligaments; Ovary

DOI: 10.4328/JCAM.2300 Received: 21.01.2014 Accepted: 15.02.2014 Printed: 01.11.2013 J Clin Anal Med 2013;4(suppl 3): 315-7
Corresponding Author: Ali Bahadırlı, Bursa Mustafakemalpaşa Devlet Hastanesi Kadın Hastalıkları ve Doğum Polikliniği, Mustafakemalpaşa, Bursa, Türkiye.
T.: +90 2246131861 GSM: +905055793255 E-Mail: draliba@hotmail.com

Introduction

Abdominal pain is a common symptom during pregnancy, but it presents unique diagnostic and therapeutic challenges. Pregnancy is associated with various physiological, biochemical, and anatomical changes that may alter classical symptoms and signs that would be normally associated with several clinical conditions. Increased plasma volume during pregnancy and changes in the plasma proteins, increased renal clearance, and altered hepatic metabolism may pose difficulties with interpretation of biochemical markers of pathological conditions. Physiological leukocytosis and raised alkaline phosphatase that are associated with normal pregnancy may also contribute to diagnostic difficulty. Anatomical changes during pregnancy such as rapid expansion and enlargement of the pregnant uterus and the accompanying stretching of supporting ligaments and muscles as well as the pressure exerted by the gravid uterus on other intra-abdominal structures and anterior abdominal wall may result in such physiological pain or discomfort. However, it is crucial to differentiate such a 'physiological' pain or discomfort from a 'pathological' pain that results from obstetric and non-obstetric causes. Obstetric complications such as placental abruption, uterine rupture, hepatic rupture (in hemolysis, elevated liver enzymes, low platelets syndrome), and pregnancy associated sickle cell crisis usually present with acute (within minutes or few hours) abdominal pain [1]. On the other hand, obstetric problems such as chorioamnionitis and threatened preterm labor can lead to chronic (over few hours/days) abdominal pain. Non-obstetric acute abdominal pain during pregnancy may be caused by underlying gastro-intestinal (e.g. acute appendicitis, acute gastritis, perforated peptic ulcer, acute mesenteric infarction, strangulated herniae, volvulus, intussusception, acute pancreatitis, biliary colic, diverticulitis), urogenital (e.g. ureteric colic, renal colic, caliculi, pyelonephritis, torsion of ovarian cysts, uterine fibroids), thromboembolic (e.g. pelvic venous thrombosis, ovarian vein thrombosis), musculo-skeletal (symphysis pubis diasthesis) or extra-abdominal (aortic dissection, myocardial infarction) conditions. Other non-obstetric conditions such as mesenteric lymphadenitis, strangulated hernia, chronic pancreatitis, chronic peptic ulcer disease, inflammatory bowel disease, chronic cystitis, urinary retention and also appendicitis may cause chronic abdominal pain.

Here we present a pregnant woman suffering from chronic abdominal pain and subsequently found to have an unusual anatomic variation of ovarian ligament observed during cesarean section. This rare variation inducing a shape of ring and compressing the ipsilateral fallopian tube is described with visual data.

Case Report

A 27-year-old nulliparous pregnant woman, who had two abortions previously was admitted to the department of obstetrics at 31 weeks of gestation with abdominal pain spreading generally over her right flank. She defined a dull pain that increased gradually in the previous 6 weeks. Her previous medical history was unremarkable, and the pregnancy was not complicated. The woman did not report any abdominal operations. Her obstetric and abdominal ultrasonography findings were normal. Laboratory investigations including complete blood count, blood glucose level, serum liver enzymes, and urinalysis were normal. No contractions were present during tocography. Cervical examination revealed no dilatation. Paracetamol was prescribed for analgesia and a follow-up was planned. Laboratory tests were repeated at every visit, and the results were normal including cardiotocography. Her symptoms had not relieved during the follow-up period. Abdominal and pelvic magnetic resonance imaging was normal. Subsequently, she delivered a live infant at 39th week of gestation because of fetal distress. During the operation, right ovarian ligament was observed to be ending at the right round ligament instead of attaching to the right ovary (Figure 1, Figure 2). Right fallopian tube was compressed between the ring shaped ovarian ligament and the right side of the uterus (Figure 3). After involution of the uterus the compression of the right fallopian tube was reduced. The free circular part of the right proper ovarian ligament was excised. Woman's abdominal pain has ended after surgery and woman didn't have abdominal pain complaint at postpartum follow up.



Figure 1. Right side view of uterus while performing cesarean section surgery



Resim 2. Right upper side view of uterus while performing cesarean section surgery



Resim 3. Right fallopian tube which is surrounded by ipsilateral ring shaped ovarian ligament

Discussion

Diagnosis and management of abdominal pain in gravid woman is a difficult task for obstetricians. A delayed operation decision increases morbidity for both mother and fetus [2]. The use of ultrasound may be limited and computed tomography is not desirable due to fetal irradiation. Magnetic resonance has thus become increasingly popular in the evaluation of such patients [3]. In an interesting unusual case of abdominal pain in a pregnant woman, tearing of the anterior abdominal muscles from her ribs was reported as the main cause of the pain [4]. Spontaneous uterine rupture caused by placenta percreta was reported as another unusual cause of abdominal pain in the early second trimester of pregnancy [5]. Many anatomic variations of uterine arteries and round ligament arteries were reported in literature but we couldn't find a case of ovarian ligament anatomic variation [6]. The woman described in our case had suffered from chronic abdominal pain during her pregnancy period. Prompt diagnosis for this chronic abdominal pain situation couldn't be found clinically. We speculate that this pain can be caused by an anatomic variation of proper ovarian ligament. This case was highlighted that anatomic variations of uterine and ovarian ligaments may cause chronic abdominal pain in pregnancy.

Competing interests

The authors declare that they have no competing interests.

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How to cite this article:
Bahadırlı A. Unusual Anatomic Variation of Ovarian Ligament: Can It Be a Cause of Chronic Abdominal Pain During Pregnancy? J Clin Anal Med 2013;4(suppl 3): 315-7.