

Acute Mesocoliaca Appendicitis on Pregnancy: Case Report

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Abstract

Acute appendicitis (AA) is the most common non-obstetrical surgical emergency during pregnancy, the incidence is 1/1000 to 1/2000 pregnancies. The diagnosis of acute appendicitis is little changed by pregnancy, both in the first and second trimester, with some significant differences in the clinical presentation between these two quarters. We report a case of a 32-year-old patient with no significant pathological history of 16 weeks of amenorrhea.

Keywords: Appendicitis; Pregnancy; Laparoscopy; Ultrasonography

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I. Introduction

Acute appendicitis (A A) is the most common cause of operative indication for acute abdominal pain in pregnant women [1, 2]. Its occurrence during pregnancy exposes additional diagnostic difficulties and transforms ongoing pregnancy into a risky pregnancy. His clinical presentation, very varied, is a source of diagnostic errors and delay in the management, this even for the most experienced clinicians. Despite advances in imaging, the diagnosis of appendicitis is primarily clinical.

II. Case Report

32-year-old patient with no notable antecedent who consults for peri-umbilical pain with stopping of material without stopping of gas all evolving in a context of fever and conservation of the general state. Physical examination shows a hemodynamically and respiratory-stable patient febrile at 38,6 ° C, tachycardia at 100 beats per minute with distended tympanic abdomen with defense of the right iliac fossa. An ultrasonography made that is hampered by a large crescent. A biological assessment found leukocytes at 18000 and a CRP 177. A realized MRI that speaks of mesocolic appendicitis complicated by an abscess with extensive colonic distension and gravid uterus[Fig1,2,3]. Patient was operated she benefited from a laparotomy with phlegmonous appendix exploration in mesocolic position perforated at its middle part with a collection of about 100 cc of pus ta ken and sucked [Fig4]. An appendectomy with washing and drainage was performed under tocolysis by the team of gynecology. Following surgery was simple, a control ultrasound done by the gynecology team that confirms fetal viability. Patient declared outgoing on the third day of the postoperative.

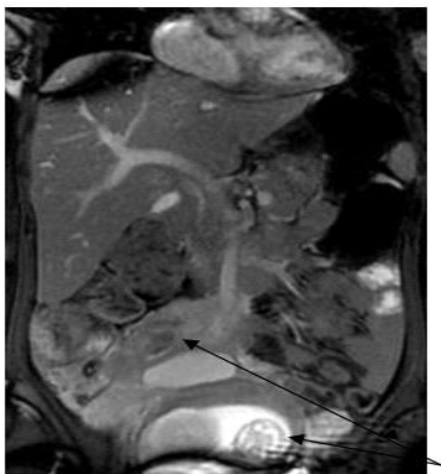


Fig 1 Sagittal section of the abdominal MRI showing the gravid uterus and collection

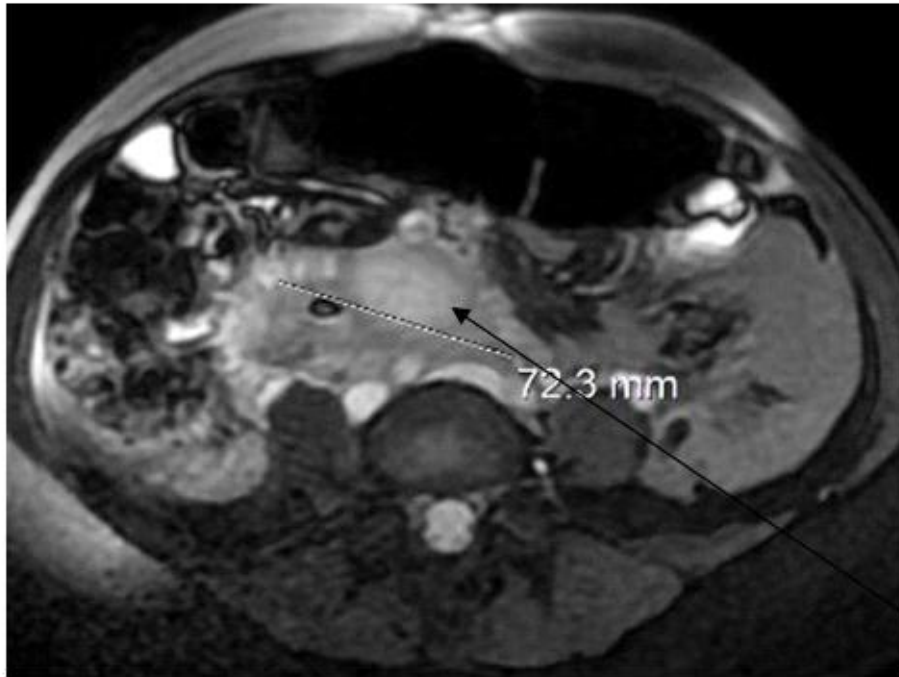


Fig 2 Axial section of abdominal MRI showing the collection

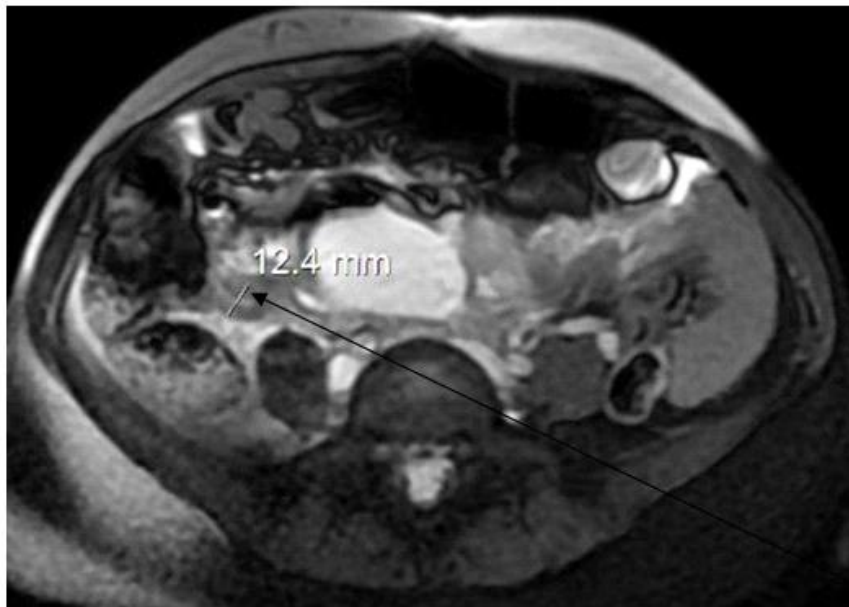


Fig 3 axial section of abdominal MRI showing appendix

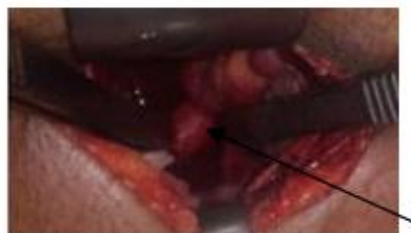


Fig4 appendiceal tip in peroperative

III. Discussion

Surgical indications for non-obstetrical conditions concern 0.2 to 2% of pregnancies. The most common etiologies are acute appendicitis, acute cholecystitis, and annexes surgery [1, 2, 3]. For some, the high level of progesterone during pregnancy would promote acute appendicitis, decreasing intestinal motility [3].

The prevalence of acute appendicitis in pregnancy varies by study, ranging from 1/1440 to 1/1783 pregnancies: -Mahmoudian et al. [4] analyzed the results of 128,300 pregnancies from 26 studies over 30 years, thus finding an acute appendicitis rate associated with pregnancy ranging from 1/1426 to 1/1783 pregnancies. - Mazze et al. [5, 6] analyzed the results of 720000 births in Sweden between 1973 and 1981, thus finding an A.A. rate associated with pregnancy ranging from 1/936 to 1/1440 pregnancies. In the most recent publications the frequency seems to be decreasing.

Most studies show a predominance of primiparous patients with acute appendicitis [4, 10].

Regardless of the stage of pregnancy, for many authors, the most frequently encountered clinical signs in order of decreasing frequency are [7, 8, 9]: Spontaneous abdominal pain, constant, The maximum pain in the right iliac fossa, For Tamir et al. [10], the rotation of the appendix under the influence of the pregnant uterus away from the viscera and peritoneal wall, which would reduce the perception of pain, and make it difficult to locate accurately. As a result, abdominal pain is often diffuse, with no painful peak at 24 hours, and is associated with a high risk of perforation. . Other more or less frequent locations of the pain: epigastric, peri-umbilical, left iliac fossa, right hypochondrium (32% [11], 20% [4]. According to the authors, the frequency of nausea ranged from 33% to 100% and vomiting from 33% to 71%.%. Signs of Blumberg: 75% for the most powerful study [4]. Hyperthermia is more often absent or moderate. The mean temperature is 37.1 ° C at admission [7, 12] and 37.6 ° C preoperatively [7, 12]. Saburral language classic sign rarely reported and of low predictive value [13]. Constant tachycardia for some [7] but without diagnostic interest for others 33% [3]. The altered facies found in case of appendiceal peritonitis.

Rectal touch unnecessary examination during the second trimester of pregnancy due to the migration of the uterus, thus rendering it inaccessible to examination, except sometimes in case of peritonitis.

The leukocyte count varies between 12700 and 23000 / mm; the average rate is around 17000 [9, 14]. Various studies conclude that CRP levels are higher than normal in 66% of A.A.confirmed cases [13, 14]. Given the frequency of urinary tract infections during pregnancy, any abdominal pain syndrome justifies an ECBU. Hemoculture to be repeated, both for diagnostic and therapeutic purposes, especially in cases of hyperthermia and / or complicated appendicitis [15].

Ultrasound is the essential imaging tool, because of its safety, speed, lack of preparation and contrast, and sensitivity (genitourinary sphere, suspicion of A.A). Sensitivity and specificity for the diagnosis of A.A. in pregnant women respectively 90% and 100% [16] by gradually increasing the pressure. The appendix is difficult to demonstrate in the presence of gas (physiological or gangrenous appendage) or A.A. perforated (subsidence of the appendiceal lumen). Ultrasound is a source of false positives and false negatives. The place of ultrasound changes according to the stage of pregnancy. Ultrasound plays a fundamental role. However, it may be inconclusive because of its limited specificity in highlighting certain tissue or for technical problems related to the pregnant uterus. The I.R.M. then takes all its importance as in our case or the ultrasound was difficult following the ileus reflexe.

CT is mostly to be avoided due to teratogenic effects.

Diagnostic laparoscopy: (Performed under GA) It is necessary to insist on the capital importance of repeating the investigations and the clinical examinations, before making the decision to practice a laparoscopic diagnosis and, of course, to reserve it only in equivocal cases .

Maintaining maternal safety involves pre- and post-operative risk assessment. Preserving fetal well-being requires preventing the risk of premature birth and avoiding intrauterine asphyxia, which supposes the maintenance of oxygenation and maternal hemodynamics. Perioperative monitoring of cardio-fetal rhythm: 20SA dice, by external fetal monitoring and maternal pulse oximetry. Postoperative monitoring should be intensive in the recovery room: -fetal: monitoring of cardiofetal rhythm and detection of the risk of premature delivery by external tocometry. Tocolyse if necessary by betamimetics or indomethacin, which remain agents of choice even if they expose postoperatively to a risk of pulmonary edema. - maternal: maintenance of a blood pressure higher than 100mm of mercury, analgesia, prevention of thromboembolic accident by elastic restraint of the lower limbs and heparin, antibioprohylaxis. The tocolytic agents act on the contractibility of the uterine muscle fibers, on their synchronization, and on the maturation of the cervix. The most powerful act on these three factors and all have undesirable effects. Preventive efficacy, pre- or intra-operative, has never been demonstrated.

The treatment remains surgical except for the appendiceal plaston that is medically treated and an appendectomy will be done later.

Laparotomy and laparoscopy are the most commonly used approaches.

Laparoscopic surgery can be performed in the first and second trimesters of pregnancy.

The two predominant causes of complications are the consequences of pneumoperitoneum (gas embolism) and the blind insertion of the first trocar (digestive and vascular wounds). The two most frequent wounds are those of the epigastric vein and the intestinal wound. Hemoperitoneum is life-threatening [17, 18].

The most common postoperative complication is wall infection, especially in cases of appendiceal perforation [19].

IV. Conclusion

In total, pregnancy makes it difficult to diagnose appendicitis. A strong clinical and ultrasonographic suspicion should lead to an appendectomy preferably by laparoscopic way in order to avoid the evolution towards more serious complications putting at risk the materno-fetal prognosis. Conservative treatment should be avoided due to higher rates of severe sepsis, peritonitis and thromboembolic events. The management must be fast and ensured by a multidisciplinary team.

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