Case report of ectopic pregnancy on transverse colon

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Summary

Abdominal ectopic pregnancy is a rare form of ectopic pregnancy, and there are a few cases of colonic implantation reported in the literature. In this report, we describe a unique instance of transverse colonic large hematocele associated with degressive ectopic pregnancy. Patient concerns: A 30–year–old female patient suffered abdominal pain and digestive disorders and did not report any gynecological diseases. The only indicator to diagnose gestative condition was beta-HCG, which increased slightly from 415IU/L to 435IU/L after 2 weeks. Transvaginal ultrasonography shows no evidence of a gestational mass inside the uterus or in the cul-de-sac, which is a frequent site of ectopic pregnancy. But abdominal CT with contrast injection revealed a hyperdense mass measuring 50×53×101mm along the edge of the right colon. A diagnosis of abdominal pregnancy was suspected. Thus, the patient underwent explanatory laparoscopy to confirm the diagnosis and for the treatment. Pathological examination confirms the diagnosis of transverse colonic ectopic pregnancy. After a few days of uncomplicated recovery, the patient was cleared to return home. On the first day following surgery, the beta-HCG results decreased to 112IU/L, and additional testing produced negative results. *Conclusion:* Ectopic pregnancy may be implanted anywhere in the abdominal cavity even on the transverse colon. When diagnosing a female patient of reproductive age with an inexplicable rise or even low blood BetaHCG level, clinicians must consider the potential of abdominal ectopic pregnancy.

Keywords: Abdominal pregnancy, colonic ectopic pregnancy.

1. Background

Ectopic pregnancy is the leading cause of maternal morbidity and mortality worldwide, accounting for 1.3% to 2% of all pregnancies [2]. Ectopic pregnancy occurs when the embryo implants outside the uterine cavity, usually in the fallopian tube (95%). Abdominal pregnancy is the least common of all types of ectopic pregnancy. In a review of case reports of early abdominal pregnancies (identified at <20 weeks gestational age) the most common location was the pelvic peritoneum (24%) with the posterior cul-de-sac (20%) more common than the anterior cul de sac (4%) [1]; The farther the fetal mass goes from the pelvis, the rarer it is. Colonic pregnancy is a rare variant of abdominal pregnancy [1]. In this case, the fetal mass moved higher and located on the wall of the transverse colon.

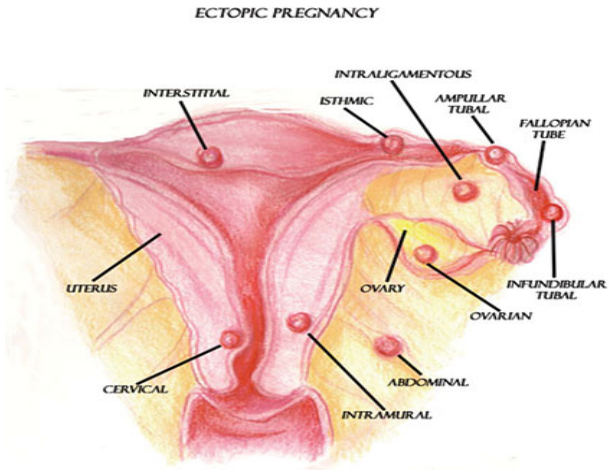

Figure 1. The common site of ectopic pregnancy

***Received**: 10 October 2023, **Accepted**: 08 November 2023*
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2. Case presentation

On July 18th, 2022, a 30-year-old female patient, who suffered abdominal pain and digestive disorders and did not report any gynecological diseases, came to The Outpatient Department of 108 Military Central Hospital. In addition, the patient complained about menstrual disorders and had unprotected intercourse, then deployed emergency contraceptive pills. The results from the endoscopy of her digestive tract were normal. A tumor adhering to the transverse colon (dimension: 5.3×5×10.1cm) was found by computer tomography scan, and the beta HCG level was elevated (415IU/L). The mass characteristic was similar to the omental hematoma. Transvaginal ultrasonography revealed no fluid in the abdominal cavity and nothing in the uterus. Despite medical treatment, she declined to be committed to the hospital.

Two weeks later, on August 1st, 2022 she was hospitalized due to ongoing abdomen pain and sometimes tension. Beta-HCG level increased to 435IU/L, and the movable mass about 6cm in diameter was palpated at the upper abdominal region. The uterus and ovaries at the bimanual pelvic examination were both of normal size.

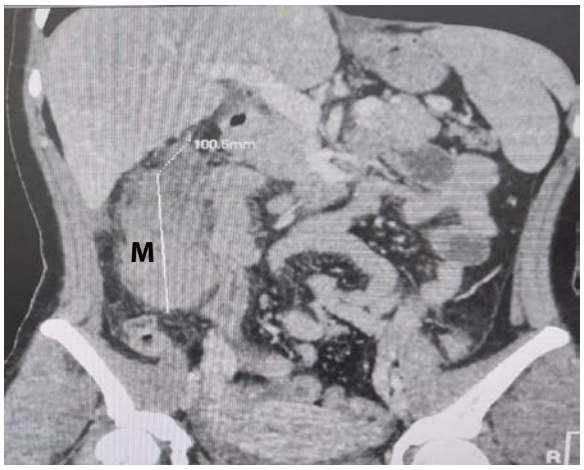

Figure 2. The ectopic pregnancy mass (M) on abdominal computer tomography scan.

Based on the clinical examination, laboratory results, and imaging findings, the abdominal pregnancy was established but the severity of the condition was uncertain. Therefore, exploratory laparoscopic surgery was indicated and performed on August 2nd, 2022.

Intraoperatively, the uterus was normal size, the fallopian tubes were soft, with no dilation, the ovaries had no tumors, and there was no bloody fluid in the abdomen. With further local exploration, a mass of 10×6cm in dimension was found attached to the free margin of the transverse colon. The mass was removed from its attachment site with no significant bleeding or bowel perforation occurring. The pathology of the specimen showed that the colon serosa had a lesion with few placental villous including mononucleated cytotrophoblasts and multinucleated syncytiotrophoblasts in the blood clots, confirming the nature of the mass implanted on the transverse colon as ectopic pregnancy.

After a five-day hospitalization, the patient's health improved without incident, and on August 3, 2022, the beta-HCG results steadily decreased to 112IU/L.

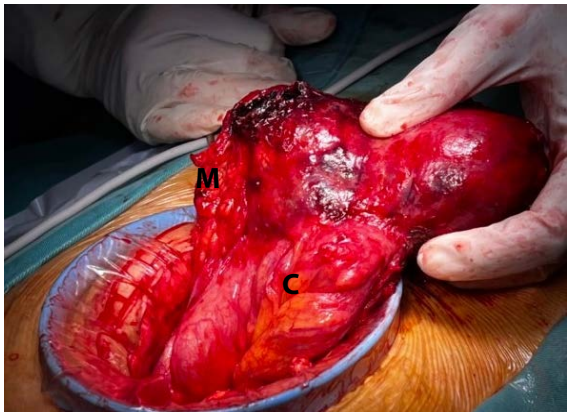

Figure 3. Image of an ectopic pregnancy attached to the wall of the transverse colon (M: ectopic pregnancy mass; C: transverse colon)

3. Discussion

Ectopic abdominal pregnancy, which is described as the placenta implanting anywhere in the abdominal cavity other than the female reproductive organs, was initially reported as an autopsy discovery. The difference between main and secondary cases remains frequently up for discussion. However, the treatment for these cases is not different. The present reported case is

considered primary, which meets the diagnostic criteria described by Studdiford in 1942 [7]. These included normal tubes and ovaries with no evidence of recent or remote injury, an absence of any evidence of antero-peritoneal fistula, the presence of a pregnancy-related exclusively to the peritoneal surface, and early enough to eliminate the possibility of secondary implantation following a primary nidation in the tube.

In the last 5 years, reported cases of ectopic pregnancies on the various parts of the colon:

Author	Year	Site of implantation	Week gestational age	Level beta-HCG	Management
Sarr et al [6]	2018	Sigmoid	16	No test	Right adnexectomy, appendectomy, colostomy
Fessehaye et al [2]	2021	Sigmoid	25	No test	Removal of the mass, segmental resection, and anastomosis due to bowel injury
Nguyen Manh Thang et al [4]	2021	The anterior wall of the rectum	6	16.088	Removal of the mass, suture of the rectal mucosa
Riham Suleiman et al [5]	2022	Ascending colon	6	43.000	Removal of the pregnancy one dose of methotrexate
Le Nguyen Ngoc Diep et al [3]	2023	Rectum	The Yolk sac and embryo length of 5mm were visible in the ultrasound (fetal heartbeat)	8.833	At laparoscopic operation,3 doses of methotrexate (25mg) were injected intravenously, into the gestational sac, and the fetal heart

There is no difficulty in confirming the abdominal ectopic in case the patient has a high Beta HCG level and fetal heartbeat is detected (Suleiman, Nguyen Manh Thang), or fetal movement in 16-25 weeks gestation age (Sarral and Feseheay). These cases can be treated medically, surgically, or with a combination of both.

The table shows the reported cases of ectopic pregnancy with primary colonic implantation and this case is the first one documented the transverse colon. In this instance, making an accurate initial diagnosis was challenging. Although the patient claims to have no menstrual disorders, sometimes the symptoms of vaginal bleeding due to hormonal reactions of pregnancy can coincide with the patient's normal menstrual period, causing doctors to be subjective and rule out the possibility of pregnancy. The symptoms of dull abdominal pain in the right lumbar and epigastrium are not typical of the symptoms of ectopic pregnancy, so they can confuse the diagnosis. Therefore, we emphasize the value of testing beta HCG in women of childbearing age when there are symptoms of abdominal pain, digestive disorders (vomiting, nausea, diarrhea, fever…) accompanied by a history of possible unwanted pregnancy (unsafe sex, using emergency contraceptive pills...) is important from which suspected pregnancies can be screened early.

The patient ruled out gastrointestinal pathologies such as injury or embolism, so it can be assumed that this is a primary ectopic pregnancy in the colon wall that then degenerates into a hematocele that may rupture secondary to cause violent bleeding and a potentially life-threatening situation. The patient's serum levels of beta HCG were persistent and increased slightly over two weeks, from 415 to 435IU/L. The patient's uterine endometrium measured 6mm, and there was no image of a gestational sac in the uterus. Therefore, we chose surgical treatment. To prevent damage, a gynecologist and gastrointestinal surgeon worked together as a multidisciplinary team to gently remove the gestational tumor. Following effective management, the value of Beta-HCG became vanishable.

4. Conclusion

Ectopic pregnancy on the transverse colon is a rare implantation site of ectopic abdominal pregnancies. The combination of the clinical symptoms, beta HCG level, CT scan, colon endoscopic examination, and exploratory laparoscopy is required for an early diagnosis and effective therapy.

References

1. Mamo A and Adkins K (2022) *Abdominal pregnancy: Pathophysiology, diagnosis, and treatment*. Journal of gynecologic surgery 38: 193.
2. Fessehaye A (2021) *Abdominal ectopic pregnancy complicate with a large bowel injury: A case report*. Journal Medical Case Report 15 (1): 127.
3. Le Nguyen Ngoc Diep (2023) *Rectal ectopic pregnancy managed successfully by minimally invasive treatment using local methotrexate injection and systemic methotrexate administration: An extremely rare case at Tu Du Hospital in Vietnam and literature review*. Journal of minimally invasive gynecology 30(5): 418-423.
4. Nguyen Manh Thang (2021) *Rectal ectopic pregnancy*. Medicine 100(6): 24626.
5. Suleiman R, Adwan D, Safadi MF (2022) *Ectopic abdominal pregnancy on the ascending colon*. Clinical case report 10: 06581
6. Sarr ISS, Faye M, Faye PM, Seck M, Ka O, Dieng M (2018) *Acute intestinal occlusion revealing abdominal pregnancy: A case study*. Pancific Africal Medicine Journal 31: 155.
7. Studdiford WE (1942) *Primary peritoneal pregnancy*. Am Journal Obstetric Gynecology 44: 487-491.