

CASE REPORT

Obstetrics

An early return to fertility resulting in ectopic pregnancy 10 weeks post vaginal birth: A case report

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Abstract

Background: There exists an unmet need for timely initiation of reliable postpartum contraception among mothers. This could result in unplanned and closely spaced pregnancies that may endanger the lives of the mother and the unborn baby.

Case presentation: A 22-year-old para 1+0 presented to the emergency department with gradual onset of lower abdominal pains, per vaginal spotting, and bloating 10 weeks after childbirth. She reported full-time breastfeeding and regular and consistent use of male condoms for contraception. A diagnosis of ectopic pregnancy was established following a positive urine pregnancy test and a transabdominal

ultrasound that revealed features of right tubal pregnancy. Exploratory laparotomy and partial salpingectomy were performed. The patient was stable and was discharged on the second postoperative day.

Conclusion: Early return of fertility in exclusively breastfeeding mothers is possible; hence, an effective family planning method is needed during the postpartum period to minimize the complications of short interpregnancy intervals.

Keywords: breastfeeding, early return of fertility, ectopic pregnancy, postpartum contraception

Introduction

An estimated 40% of pregnancies occurring worldwide due to failure of a contraceptive method or their nonutilization are unintended and undesired (1). Full-time postpartum breastfeeding can delay the return of ovulation and hence decrease fertility (2). The lactational amenorrhea method (LAM), developed from this concept, is a reliable natural contraception with more than 98% efficacy in exclusively lactating mothers as long as amenorrhea persists for up to 6-9 months postpartum (2). Its efficiency is easily altered as it depends on many factors rendering it unsuitable for effective contraception (1,3). Healthcare providers are not keen on the immediate provision

of effective postpartum family planning despite its numerous benefits, such as reducing maternal and child mortality by up to 30% and 10%, respectively (4). This is a case of an early return to fertility and conception despite combined LAM and male condom use, with ectopic implantation, in less than 10 weeks after childbirth.

Case presentation

A 22-year-old para 1+0 presented to the emergency department at Kenyatta National Hospital (KNH) as a referral with gradual onset of lower abdominal pains, per vaginal bleeding, and bloating 10 weeks after childbirth. The pain was more intense on the right side, radiated to the right upper quadrant and

was partially relieved by acetaminophen. Three days after the onset of the symptoms, the pain worsened, necessitating her to visit a private health facility in her husband's company, where the right ectopic pregnancy diagnosis was established following a positive urinary pregnancy test and a transabdominal ultrasound. She was given analgesics, and blood samples were taken for hemogram, blood typing, and crossmatching before referral for theater services.

On admission to the emergency department, the patient reported having had a spontaneous vaginal birth at a hospital 10 weeks previously. The outcome was a male infant of 3200grams, alive, and well, exclusively breastfeeding on-demand with regular intervals of 2-3 hours and a suckling duration of 20-30 minutes per feed. She reported having received menses which appeared normal at 8^{2/7} weeks following parturition. She resumed sexual intercourse two weeks after childbirth with regular and consistent usage of male condoms for contraception. No prior history of sexually transmitted infections or multiple partners was disclosed.

On examination, the patient was stable but in pain, mildly pale, not jaundiced or cyanosed. Her blood pressure (BP) was 91/55mmHg, pulse rate 92 beats per minute (BPM), temperature 36.4°C, and

respiratory rate 22 breaths per minute. Her abdomen was nondistended, had no scars, no ecchymosis, bowel sounds were present, regular percussion note, tenderness, and guarding on the right iliac fossa. Her hemoglobin level was 12.3g/dl, hematocrit 37.7%, white blood cell count 4.60×10^9 , and platelet count 258×10^9 . Her urinalysis revealed blood (3+). She had a positive urinary pregnancy test and right adnexal mass measuring 5.12 x 3.73cm, suggestive of a right tubal pregnancy on transabdominal ultrasound (**Figure 1**). Emergency exploratory laparotomy was performed, which revealed a right slow leaking tubal pregnancy at the fimbriae with an estimated volume of about 20cc, and moderate hemoperitoneum of 500mls. The products of conception (POC) were removed. Right partial salpingectomy, 6cm from the cornua, was performed, followed by peritoneal lavage. During her hospital stay, the patient was encouraged to express breast milk, which the husband took to the infant. This was done under the supervision of the hospital nutritionist. The hospital counselors offered the patient psychosocial support. The patient was stable and discharged on oral hematinics, analgesics, and antibiotics on the second postoperative day. An appointment for family planning services was scheduled within one week of discharge.



Figure 1: Transabdominal ultrasound demonstrating a right adnexal mass.

Discussion

The lactational amenorrhea method is a highly effective natural contraceptive in breastfeeding women postpartum (1). Physiologically, the high circulating prolactin levels in lactating mothers, spiking even more during and after suckling, inhibits the normal pulsatility of gonadotropin-releasing hormone (GnRH), resulting in anovulation or an oligo-ovulatory state and thus a meager conception rate (2). However, it is impossible to define the exact duration of amenorrhea in lactating mothers, as ovulation is possible even before menstrual resumption (5). Therefore, when pregnancy is undesired in the postpartum period, LAM is unreliable due to the variability and unpredictability of the return to fertility (6). This case is an example of ovulation leading to conception in lactating, amenorrheic mother within less than 10 weeks after childbirth although with ectopic implantation of the conceptus. It supports the theory of the existence of a group of women whose hypothalamic-pituitary-ovarian axis is minimally impacted by the inhibitory effects of suckling and the resulting hyperprolactinemia (6). Other factors such as maternal age, parity, breastfeeding frequency and intervals, total daily suckling time, and urbanization influence the efficacy of LAM (1,3,7).

Women typically discover they are pregnant around 5.5 weeks, which is also the average age of diagnosis for most ectopic pregnancies (8). The estimated date of conception, in this case, would be as early as 4-5 weeks after birth. The per vaginal bleeding reported as menses at 8^{2/7} weeks could have resulted from endometrial shedding in an ongoing ectopic pregnancy. In addition to LAM, the patient reported regular and consistent use of male condoms for contraception. However, male condoms have a failure rate of 3% and 12% for perfect and typical use, respectively, making them unreliable for contraception (9). The combination still did not hinder the occurrence of pregnancy even though the association would theoretically confer better contraceptive success. Early ovulatory cycles and fertility return, leading to conception in full-time breastfeeding amenorrheic women, is possible. The effectiveness of LAM and or barrier methods can be easily altered if not correctly used, resulting in increased morbidity and pregnancy-related complications in the event of short interpregnancy intervals (10). Consequently, reliable contraception methods should be discussed and offered to mothers following delivery.

Conclusion

Ovulation and conception may occur very early in the postpartum period leading to short

interpregnancy intervals and associated complications despite full-time breastfeeding and amenorrhea. Antenatal discussion on postpartum contraception should be initiated in the clinics. Upon delivery, adequate information on an appropriate, safe and reliable method of contraception should be offered to all mothers.

Consent for publication

Informed consent for publication was obtained from the patient.

Declarations

Conflict of interests

The authors declare no conflicts of interest.

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