

Unexpected pregnancy after laparoscopic bilateral salpingectomy and insertion of Mirena

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Objectives

To highlight the importance of diagnosing very early pregnancies prior to permanent contraceptive surgery

Case report

A 30 year old woman presented to a tertiary care hospital in Melbourne with abdominal pain, nausea and vomiting. She had undergone laparoscopic bilateral salpingectomy and insertion of a Mirena 24 days ago at a different hospital. On review of the notes from surgery, the salpingectomy wasn't done for permanent sterilisation and the Mirena was inserted at the same time for regular heavy menstrual bleeding. Patient had 4 children, all delivered vaginally and no other significant medical or surgical history. She had regular menstrual periods and relied on male condoms for contraception. Her last menstrual period was 26 days prior to her surgery and had a negative urine Beta hCG (BhCG) test on the day of surgery. Her serum BhCG on admission was 10200 mIU/ml and was rising on the repeated sample on the following day. Pelvic ultrasound scan (USS) revealed an intrauterine gestational sac compatible with 5 weeks and 4 days with no yolk sac or fetal pole. There was an incidental finding of a right uterine vein thrombus on the pelvic USS. After exploring all the options, the patient opted to have a surgical termination of the pregnancy and exchange of Mirena. The procedure was uncomplicated. She was started on Apixaban for 6 weeks and the follow up USS showed resolution of the uterine vein thrombus and correct placement of the Mirena. The repeat serum BhCG after a week from the procedure was 36 mIU/ml.

Discussion

There are very few reported cases of spontaneous conception after bilateral salpingectomy for permanent contraception in the literature, as the procedure is said to be nearly 100% successful. This is likely to be a case of a missed early pregnancy on a urine BhCG test done on the day of surgery, despite regular use of contraception that had worked relatively reliably previously for her. Most commercially available urine pregnancy test kits give a positive result with BhCG levels of ≥ 25 mIU/ml. Interpretation of a weakly positive test result is challenging and should be followed by a serum BhCG measurement which is more sensitive at detecting the very early pregnancy with a result of ≥ 5 mIU/ml considered positive.

Conclusion

Offering a serum BhCG test prior to any form of contraception to all women may not be cost-effective. Ideal timing of surgery is equally fraught with administrative issues in a public hospital. Conscientious counselling about preoperative contraception, assessment of individual patients, careful interpretation of the urine pregnancy test and offering serum BhCG testing where necessary may aid in preventing such complications.

References

1. Tanja Baltus, James Brown, Sujana Molakatalla, Supuni Kapurubandara, *Spontaneous Pregnancy after Total Bilateral Salpingectomy: A Systematic Review of Literature*, *Journal of Minimally Invasive Gynecology*, Volume 29, Issue 2, 2022, Pages 213-218, ISSN 1553-4650, <https://doi.org/10.1016/j.jmig.2021.09.713>.