Fertility after oophorectomy due to torsion

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ABSTRACT

Objectives: To investigate the prevalence of infertility in patients who underwent salpingo-oophorectomy due to adnexal torsion (AT).

Methods: All adult women admitted to the Teaching Institution of the University of Dammam, Dammam, Saudi Arabia who underwent surgery due to AT between January 2001 and 2010 were included. Complete data was collected from the time of admission to the follow up. The data was entered into the database and analyzed.

Results: The data of 26 patients was available for analysis. The mean age (±standard deviation) at presentation was 22.19±4.4 years, and average age at follow up was 34.81±5.75 years. The average delay in presentation was 37.76±47 hours, and the surgery was performed at 45.07±48.57 hours. The right side was involved in 13 (53.8%) of the cases. Fourteen (53.9%) women presented with infertility. Eleven (78.57%) were treated for infertility, and 5 (45.5%) conceived. Patients who were younger at the time of torsion fared better with regard to pregnancy (p<0.03, 95% confidence interval: -6.85; <0.58).

Conclusion: Patients who undergo salpingo-oophorectomy for AT have an increased risk of infertility and should be warned of this impending complication.

Disclosure: The author has no conflict of interests, and the work was not supported or funded by any drug company.
were married with children, and 8 were of pediatric age range, and thus excluded from the study. Two patients were lost to follow up. The sample size that was analyzed was 26. The mean age at presentation was 22.19±4.4 years and average age at age follow up was 34.81±5.75 years (Table 1). The average delay in presentation was 37.76±47 hours, and the surgery was performed after 45.07±48.57 hours. The right side was involved in 13 (50%) cases. All patients had abdominal pain, 13 (50%) had vomiting, and 6 (23%) were febrile. The mean age at marriage was 25.73±3.81 years. Twelve women (46.1%) had spontaneous pregnancies, while 14 (53.9%) were infertile. The husbands of these women were normal after all the investigations. Eleven (78.6%) were treated for infertility. Three had pelvic adhesions on laparoscopy and 6 were normal. Five (45.5%) conceived, 3 after IVF, and 2 after ovulation induction and intrauterine insemination. Three women neither became pregnant nor received any treatment. There was no significant different between the age at which oophorectomy (p=0.604, 95% confidence interval: -17.37, <3.72) was carried out and the side of the ovary removed (p=0.4946 right side, and p=0.5006 left side by Fisher Exact 2 tailed test) (Table 2).

Discussion. Our study showed that women who had salpingo-oophorectomy carried a 53.9% increased risk of infertility. Additionally patients who were younger at the time of torsion and surgery fared better with regards to becoming pregnant, while those women who had a right-sided salpingo-oophorectomy had a reduced chance of pregnancy. Adnexal torsion is a gynecological emergency, which is well covered in the literature,1,10,11 but there is limited data regarding incidence of women who fail to become pregnant after AT and salpingo-oophorectomy. In a recent report of 35 patients of unilateral ovariectomy, Bellati et al7 found 86% of their patients who had an ovariectomy had at least one successful pregnancy, but in our patients only 46% became pregnant spontaneously.

There are conflicting opinions regarding the single ovarian hormonal function. The study of Zhai et al12 found that the younger patient population, following a unilateral ovariectomy in childhood, maintained normal function in adulthood, but Lass et al13 had earlier reported that women with a single ovary responded less to stimulation than women with 2 ovaries during in vitro fertilization treatment protocols. Hendricks et al14 also suggested that women with a single ovary produced less oocytes, even after higher and longer doses of stimulation. It was found that women with a single ovary had higher basal follicle stimulating hormone (FSH) when compared with patients with both ovaries, and it was confirmed that higher FSH is an indicator of poor response for IVF protocols.15 Unfortunately, we could not compare the age range of our patients, but we observed that patients who had their ovariectomy at a younger age responded well. There is no comparative data available to confirm the dominance of one ovary over the other, or which is more important for conception. In this study, there were 14 patients whose right ovary was removed and had significantly lower pregnancy outcomes with the intact left ovary. Out of 12 patients that became pregnant spontaneously, 66.6% of them had their right ovary intact. Our study echoes the results of the study by Fukuda et al,16 where they found that right side ovulation is more important for implantation and pregnancy in both naturally fertile women and those who are undergoing IVF.

Our study has limitations. For one, it is retrospective in nature, and secondly it is only representative of a small number of patients. We believe that we have highlighted issues that need serious consideration. The best option is to preserve both ovaries and maintain full fertility in AT, but every attempt should at least be made to save as much of an ovary as possible. The first line of physicians, including emergency room, pediatricians,
and general surgeons, should be regularly reminded to suspect AT, particularly of the right side, as this could be easily misinterpreted as acute appendicitis. Children and women who have to lose an ovary should be warned of future fertility issues.

Received 29th September 2014. Accepted 26th January 2015.

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