Summary

The rate of Caesarean deliveries has been increased over the last 25 years in most of the developed countries. It seems also that Egypt is following suit, the overall CS rate increased progressively from 4.5 % in 1965 to almost 25 % in 1988.Currently in the UK, slightly more than one in seven women experiences a complication during labor that provide an indication for CS . With rapidly rising CS rates, one of the prime issues for concern is the effect of operative delivery on future fertility ***(Sur and Mackenzie, 2005).***

Hemminki, (1986) concluded that women who had their first baby by CS tend to have fewer children than those who deliver vaginally. Similarly, ***Jolly et al. (1999)*** showed that over 5 years following primary CS there were 13% more women with no subsequent children compared with those who had normal deliveries. Whilst various epidemiological studies have suggested a link between CS and subsequent infertility, few have studied the nature of this association. As yet it is unclear whether the reproductive potential of women is compromised as a result of CS or whether the choice of limiting their fertility is largely voluntary.

Tubal pathology is one of the main causes of infertility. It is estimated to account for 12–33% of infertility . ***(Collins et al., 1995) ; (Snick et al., 1997)*** . This probably is an underestimate, since most aspects of tubal dysfunction escape our observation. Tubal pathology is usually accompanied by peritubal adhesions and tubal occlusion. In the routine fertility work-up, our ability to evaluate tubal function is limited. We currently judge the degree of tubal damage mainly by tubal patency and the extent of peritubal adhesions ***(Cheong and Li , 2005).***

Tubal disease and pelvic adhesions prevent normal transport of the oocyte and sperm through the fallopian tube. The primary cause of tubal factor infertility is pelvic inflammatory disease caused by pathogens such as chlamydia or gonorrhea. Other conditions that may interfere with tubal transport include adhesions from previous surgery or non tubal infection (eg, appendicitis, inflammatory bowel disease), and pelvic tuberculosis ***(Killick et al., 1999).***

This is a case- control study which was conduced in the gynacology and obstetric department faculty of medicine Benha university in the period from April 2010 to March 2012. A total number of 150 women were included in this study. Their age range between 20-40 years divided into.

***-Study cases*:** included 50 women with 2ry tubal infertility diagnosed by sonohysterosalpingography.

The study cases were compared with two sets of controls.

-***The first control group:*** included 50 women with 2ry non-tubal infertility. All these women had patent both tubes demonstrated by sonohysterosalpingography.

-***The second control group*:** included 50 fertile women with a history of a previous live birth, who had a second delivery during the same period of time over which the case presented.

Exclusion criteria

1. Previous history of infertility treatment.
2. Previous history of tubal sterilization or tubal surgery.

All patients subjected to the following:

1- Verbal consent.

2- History taking: Personal, menstrual, obstetric, sexual and past history.

3-Examinations: general, abdominal and pelvic examinations.

4-Investigations: only for infertile groups. Semen analysis, ultrasonic ovarian scan, laboratory investigations and sonohysterosalpingiography.

Sonohysterosalpingography (SHSG) is a simple, safe, and well-tolerated examination technique used for investigation of the uterine cavity and fallopian tubes with very few adverse effects and a low occurrence of complications. It consists of an instillation of sterile saline through a Foley's catheter inserted through the cervix with simultaneous transvaginal sonography. This method was shown to be a valuable and safe diagnostic procedure, and it was shown an effect in increasing spontaneous pregnancy rates ***(Hamilton et al., 2003).***

As regarding the age , the duration of marriage and the parity no significant difference between cases and both controls groups.

As regarding history of previous PID, it was highly significant among women with 2ry tubal infertility compared to history of PID among women with 2ry non-tubal infertility and fertile women.

As regarding history of ectopic pregnancy, it was significant among women with 2ry tubal infertility compared to history of ectopic pregnancy among women with 2ry non-tubal infertility but it was highly significant when compared to fertile women.

As regarding history of IUCD use, it was significant among women with 2ry tubal infertility compared to history of IUCD use

among women with 2ry non-tubal infertility but it was highly significant when compared to fertile women .

As regarding history of previous pelvic surgery, the results of this study showed that women with 2ry tubal infertility had a higher incidence of previous pelvic surgery compared to women with 2ry non- tubal infertility and fertile women with high statistically significant difference.

History of appendectomy was not significant among women with 2ry tubal infertility compared to history of appendectomy among women with 2ry non-tubal infertility. While comparing with fertile women there was significant difference.

History of miscarriage among 2ry tubal infertility group compared to history of miscarriage among 2ry non-tubal infertility and fertile women groups showed Previous miscarriage was significantly lower among women with 2ry tubal infertility when compared to history of miscarriage among women with 2ry non tubal infertility but it was significantly higher when compared to fertile women.

History of termination of pregnancy among 2ry tubal infertility group compared to history of termination of pregnancy among 2ry non-tubal infertility and fertile women groups demonstrated that no statistically significant difference between 2ry tubal infertility and both control groups.

With rapidly rising CS rates, one of the prime issues for concern is the effect of operative delivery on future fertility. When we made another way of comparison by comparing 2ry tubal infertility group to both control groups regarding history of previous CS, we found that 18% of

tubal infertility group were delivered by CS compared to 22% in non tubal infertility group and 20% in fertile group. That indicates no statistically significant difference.

These data conclude that CS per se is unlikely to be a direct cause of tubal infertility. The presumed role of potential pelvic infection, scarring and adhesions after CS as a cause of subsequent tubal damage, may need to be reconsidered. And lastly this study goes some way towards allaying current concerns about the direct pelvic effects of CS and suggests that other causes may need to be explored.