

## IATROGENIC SECONDARY SUBFERTILITY WITH ANOVULATION : A CASE REPORT

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### Introduction

Identification of problems of subfertility has been increasing through its evaluation and the way of management has improved with the development of new technologies.

Infertility means absolute state of failure to conceive. On the other hand subfertility means relative state of failure to conceive. As such secondary subfertility means inability to conceive after one year of regular unprotected coitus after an initial phase of fertility<sup>1,2</sup>. Ten to fifteen percent of marriage couple prove childless. Delays in achieving conception and increased rates of pregnancy loss share common risk factors, such as advancing age (over 35 years) and cigarette smoking<sup>1,2,3,4</sup>.

Anatomical defect preventing sperm ascend may be congenital or may be iatrogenic, such as congenital elongation of cervix, second degree uterine prolapse, acute retroverted uterus, pin hole os may at time be implicated, or the cervical canal may be occluded by a polyp. Vaginal factor to prevent sperm ascend due to atresia of vagina (partial or complete), transverse vaginal septum, septate vagina, or narrow introitus are included in congenital group. But those factors may be iatrogenic<sup>1</sup> and may be diagnosed by hysterosalpingography (HSG)<sup>5,6</sup>.

In this case report iatrogenic vaginal factor which prevents sperm ascend through cervix as well as its management was mentioned.

The diagnosis is made by local examination with cuscus speculum or by HSG<sup>7</sup> and incidentally during dilatation and curettage.

Treatment consists of removal of vaginal septum and reconstruction of cervix followed by dilatation and curettage.

### Case report

A patient named Helena Akter, aged 30 years,

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housewife, hailing from Narayangong, presented at out patient department at infertility unit of department of Obstetrics and Gynaecology of Bangabandhu Sheikh Mujib Medical University (BSMMU) with the complaints of subfertility for five years following perinatal death of her only child by caesarian section.

According to patient's statement she was married for 6 years. From her menarche she was regularly menstruating women with average flow and duration. One year after her marriage she delivered an asphyxiated baby by caesarean section due to obstructed labour but perinatal death occurred. Since then she had been trying to conceive for 5 years despite her scanty menstruation that was cyclical but lasted for 1 day as spotting. According to her gynecologist advice all investigations were done regarding subfertility such as semen analysis for her husband and hormone profile for wife. Her FSH level was 11 mIU/ml, LH level was 9.1 mIU/ml and thyroid hormone found normal. She was also treated with ovulation inducing drug 4 cycles at 6 month interval for two times but failed to conceive. After that, she underwent to do HSG on April 05 but the procedure failed due to failure to introduce canula<sup>8</sup>. After failure of HSG she was needed for dilatation under general anesthesia with the aim of attempt to do repeat HSG.

With these complaints she was admitted at BSMMU and was examined on 1<sup>st</sup> May 2006. She was found mildly anemic, normotensive, averaged body build. Her weight was and body mass index (BMI) were 35 kg and 17 Kg/m<sup>2</sup> respectively. Local examination revealed transverse vaginal septum at the upper part of vagina and pin hole opening at the middle of the septum. Cervix was felt through that septum.

Under general anesthesia patient was examined on 5<sup>th</sup> May 2006 on the 25<sup>th</sup> day of her menstrual cycle. Transverse vaginal septum at the upper end of vagina and pin hole depression at the middle of the septum was found. Cervix was felt through that septum. Bimanual examination of uterus revealed bulky, anteverted with free fornices.

A transverse incision was given over the transverse vaginal septum. Cervix was found through this

opening. Vaginal wall was aperted and cervix was caught with allie tissue forceps. Dilatation was done up to 6 mm with Hagers' dilator and then small amount of old tarry colour blood came out. Cavity was found 7 cm and curettage was done. After that all flap of vagina were sutured with the cervix, thus vaginal reconstruction was done. Proper haemostasis was maintained. Endometrium was sent for histopathology and for AFB staining and culture. Her post operative period was uneventful and she was discharged on 2<sup>nd</sup> day. On discharge her medication was "Prempac C" for 3 months. After that she observed regular menstruation. So HSG was done on 4<sup>th</sup> September 2006. Both tubes were found patent and cavity was normal. Then ovulation induction was given with "Clomifine citrate" for 3 month from 7<sup>th</sup> January 2007 but failed to conceive. On the 4<sup>th</sup> month of ovulation induction was repeated with Letrozole. Injection pregnyl was given on the 13<sup>th</sup> day of her menstrual cycle after doing folliculometry by transvaginal sonography<sup>9</sup>.

Her last menstrual period (LMP) was on 3<sup>rd</sup> April, 2007. After her missed period, pregnancy was diagnosed by serum  $\beta$  HCG on 6<sup>th</sup> May, 2007. Pregnancy support was given with hormone progesterone. Ultrasonography was done on 5<sup>th</sup> June, 2007 and 8 weeks viable pregnancy was detected.

### Discussion

Secondary subfertility is not uncommon. There are various etiological factor for secondary subfertility among which female factors are about 30%. But vaginal factor are rare. One of the symptoms of secondary subfertility is scanty menstruation which is due to anovulation. Causes of anovulation are hypothalamic, pituitary and ovarian. Scanty menstruation may be slight in amount, short in duration or both and may be regarded as a constitutional trait of no significant. Thorough diagnosis for scanty menstruation can be made by exclusion of hypothalamic, pituitary, ovarian and iatrogenic vaginal factor. It may also be a cause of secondary subfertility.

Regarding treatment vaginal reconstruction and ovulation induction are needed. Sometimes Intra Uterine Insemination (IUI) and In Vitro Fertilization (IVF) may also be needed beside simple ovulation induction. In the present case treatment with vaginoplasty followed by ovulation induction was done. That was found as successful treatment for this patient.

### Conclusion

Weight can have profound effects on gonadotrophin regulation and its release. Dieting and eating disorders are common in women. A regular menstrual cycle will not occur if the BMI is less than 19 kg/m<sup>2</sup>. It is estimated that at least 22% of body weight should be fat in order to maintain ovulatory cycles. This level enables the extra ovarian aromatization of androgen to oestrogen and maintains appropriate feed back control of hypothalamo pituitary-ovarian axis. Weight related gonadotrophin deficiency is more pronounced with LH than FSH. This and the reduction with pulsatility of gonadotrophin secretion may result in multicystic ovary. This patient had been suffering from weight related hypomenorrhoea leading to anovulation.

Patient also had been suffering from iatrogenic obstructing membrane situated across the upper vagina just below the cervix, which prevented ascends of spermatozoa across the cervix. There was a tiny opening at the middle of the membrane through which scanty menstrual blood escaped.

This state of affairs on examination, gives an impression of a vagina without a cervix is sometimes called phymosis of the cervix. It may be congenital. A minor degree of this deformity amounting to no more than an annular construction of the upper vagina is more common. Subfertility is rarely found due to vaginal atresia that can be diagnosed by local examination and treated by dilatation or by incision and suture on the principles of plastic surgery. Occasionally, excision of fibrous tissue and coverage of the raw area by freeing the adjacent wall is necessary.

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