COMPARATIVE STUDY BETWEEN ULTRASOUND AND HYTEROSCOPIC DIAGNOSIS OF THE CAUSE OF IRREGULAR UTERINE BLEEDING IN INTRAUTERINE CONTRACEPTIVE DEVICE USERS

Thesis

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LIST OF ABBREVIATIONS

AIDS : ……..Acquired immunodeficiency syndrome

AUB : ……..Abnormal uterine bleeding

Db : …….……Decibel unit

D&C : ……...Dilatation and curettage

DUB : ……Dysfunctional uterine bleeding

HIV : …….Human immunodeficiency virus

Hz : ……..Hertz

HSG : ……..Hysterosalpingography

IUCD : ……..Intrauterine contraceptive device

NSAID : ……Non steroidal anti-inflammatory drugs

MBL : …….Menstrual blood loss

PID : ……..Pelvic inflammatory disease

STD : …….Sexually transmitted disease

SIS : ……...Saline infusion sonography

TVU : …….Transvaginal ultrasonography

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Introduction

On a worldwide scale there are nearly 160 million IUCD users, most of them (over 100 million) in China. The popularity of intrauterine devices stems for their effectiveness, combined with their long duration of action. Because of their long lifespan, IUCDs require fewer visits to doctors, which mean high cost-effectiveness. IUCDs are implanted and, therefore, cannot be "forgotten", an asset much appreciated by many women ***(H.E Van Kets, 1997).***

The future of IUCDs include the Omberelle-250 and Omberelle-380 which was designed to be more flexible to reduce expulsion and side effects, the device is especially suited for nulligravid and nulliparous women ***(Wu et al., 2000).***A new system was being developed combined with a reservoir for the sustained release of levonorgestrel used for primenopausal and postmenopausal women ***(Wildemeersch et al.,2003).***

The use of intrauterine contraceptive device has been unfortunately associated with function failure on one hand, and medical complications on the other hand. Despite the increasing use of intrauterine device, their dissemination has been limited by high expulsion rates and the withdrawal of their use for medical reasons, mainly bleeding and pain**.** Other problems of IUCD use include expulsion, perforation, infection, ectopic pregnancy or pregnancy with IUCDs***(Castro et al.,1993) .***

Menorrhagia is defined as a 'complaint of heavy cyclical menstrual bleeding occurring over several consecutive cycles'. Objectively it is a total menstrual blood loss equal to or greater than 80 ml per menstruation. It is estimated that approximately 30% of women complain of menorrhagia. Excessive bleeding is the main presenting complaint in women referred to gynecologists and between 5 to 15% of women will have their IUCDs removed because of bleeding ***(Speroff L et al., 1994)***

Although bleeding problems represent the commonest side effect of IUCDs and an important medical reason for discontinuation of use, its pathogenesis still remains incompletely understood and a standard universally acceptable therapy is not yet available.

Proper insertion, change in size, material or shape of the IUCD, as well as custom fitting to avoid dimensional incompatibilities, did not significantly improve the IUCD-associated bleeding problems. Addition of copper to inert devices seemed to slightly improve the bleeding by reducing the antifibrinolytic activity but probably more was achieved through reducing the device size. The duration of bleeding and inter-menstrual spotting still remains an unresolved clinical problem that requires further evaluation. This area of clinical concern in IUCD use needs more in depth understanding and testing.

Transabdominal ultrasonographic examination is used with progressively greater frequency as an aid in the diagnosis of

gynecological disorders ***(Wilson, 1991).*** With the recent use of transvaginal ultrasonography proved to provide clear images of the uterus revealing its exact size, position, the myometrium and endometrium ***(Goldstein,1990).***

By using transvaginal ultrasound it has been possible to identify the distance between the upper end of the IUCD and the uterine fundus, and it has been reported that the position of the IUCD is related to the occurrence of bleeding and pain ***(Bernaschek, 1981).***

Direct observation of the uterine cavity permits precise identification and retrieval of IUCD site. Hysteroscopy not only permits localization of the device but allows assessment of any perforation that may have occurred secondary to the IUCD. If the IUCD is slightly "trapped" in the uterine wall, it is grasped with the forceps and removed from the uterus simultaneously with the hysteroscope. It also allows direct visualization of any uterine pathology such as polyps or synechea.

This hypothesis that hysteroscopy, with ultrasound, is of great value not only for precise locating of the IUCD, but also for evaluation of the cause of bleeding particularly in the management of that bleeding.

Aim of work

The aim of the present work is assessment of the endometrium in patients complaining of irregular uterine bleeding by both ultrasound and hysteroscopy in IUCD users. Also to compare the efficacy of both methods in detecting possible endometrial lesion.

Patients and Methods

Study subjects:

This study will be performed on sixty patients attending Ain Shams university maternity hospital out patient clinic complaining from persistance of uterine bleeding after IUCD insertion.

Inclusion criteria:

1- Those patients after at least 4 months of insertion of IUCD and having persistent uterine bleeding following IUCD insertion.

2- Menstrual disturbances may be in the form of increase in the amount and/or duration of the menstruation measured by the number of days and the number of napkins used per day.

3- Also any patient complaining from bleeding at any time other than time of menstruation will be included.

4- Age: 20-45 years.

Exclusion criteria:

1-Using any drugs affecting blood coagulation.

2-Systemic causes of abnormal uterine bleeding e.g. hypertension, thrombocytopenia, etc.

3-Previous history of local causes of abnormal uterine bleeding e.g. polyp, fibroid, etc.

Study design:

- **Sample size:** The study will be composed of 60 patients who are complaining from abnormal uterine bleeding after insertion of IUCD.
- **Groups:** The patients will be divided into 3 groups ;

  Groupe (A) 20 patients with menarrhagia.

  Groupe (B) 20 patients with metrorrhagia.

  Group (C) 20 IUCD users who are not complaining of bleeding abnormality (control group).

Methodology: All these patients will be subjected to the followings:

1- Taking their verbal consent about the procedure, risks and complications.

2- Thorough history taking to detect:

- Time of insertion of IUCD.
- Previous history of IUCD removal.
- Previous bleeding before IUCD insertion.

3- The patient will be placed in the dorso-lithotomy position to be examined.

4- Pelvic examination by cusco speculum to see the strings.

5- Transvaginal ultrasound will be done after instructing the patient to empty her bladder.