

**THREE-DIMENSIONAL ULTRASONOGRAPHIC
ASSESSMENT OF ABNORMAL UTERINE BLEEDING
IN INTRAUTERINE CONTRACEPTIVE DEVICE
USERS**

Thesis
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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

" قالوا سبحانك لا علم لنا إلا ما علمتنا
إنك أنت العليم الحكيم "

صدق الله العظيم

(سورة البقرة, الآية الثانية والثلاثون)

Abstract

The first IUCD was introduced by Richter in 1909, since then many types of IUCDs were introduced. It was reported that IUCDs are used by over than 100 million women in the world. Intra uterine contraceptive device induced irregular uterine bleeding is one of the most common complications for many women using this method. Abnormal uterine bleeding due to IUCD is considered iatrogenic dysfunctional uterine bleeding. The recent use of transvaginal ultrasound is proved to provide clear images of the uterus revealing its exact size, position, myometrium and endometrium. 3D ultrasound is more accurate than 2D ultrasound for the identification and location of IUCDs. It was reported that the position of the IUCD inside the uterine cavity is related to the occurrence of abnormal uterine bleeding. The IUCD-F and IUCD-E distances were measured using 3D transvaginal ultrasound. This study revealed that there is a direct relationship between the IUCD-F and IUCD-E distances and abnormal uterine bleeding in the form of metrorrhagia, while, IUCD presence, per say, regardless its position in the uterine cavity is related to the occurane of menorrhagia

Key words:

Intra uterine contraceptive device (IUCD) and abnormal uterine bleeding

Ultrasound and bleeding

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List of abbreviations

DUB: *Dysfunctional uterine bleeding*

IUCD: *Intra uterine contraceptive device*

IUCD-ED: *Intra uterine contraceptive device-endometrium distance*

IUCD-FD: *Intra uterine contraceptive device-fundus distance*

LNG-IUCD: *Levonorgestrel intra uterine contraceptive device*

LNG-IUS: *Levonorgestrel intrauterine system*

MBL: *Menstrual blood loss*

PID: *Pelvic inflammatory disease*

2D ultrasound: *Two-dimensional ultrasound*

3D ultrasound: *Three-dimensional ultrasound*

TVS: *Transvaginal ultrasound*

2D-TVS: *Two-dimensional transvaginal ultrasound*

3D-TVS: *Three-dimensional transvaginal ultrasound*

ROI: *Region of interest*

NSAIDs: *Non steroidal anti-inflammatory drugs*

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