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pain, perforation of bladder or intestines, intestinal obstruction, abscess, adhesions, fistula formation, and undesired pregnancy. Therefore, removal of extrauterine IUD translocation is recommended.

Objective:

The aim of this study is to describe the effective management of extrauterine IUD translocation.

Methods:

We report a case of patient who underwent laparoscopic removal of an extrauterine IUD on January 30th 2022 in the Obstetrics and Gynecology Department of the Fatmawati National Hospital Jakarta.

Results:

A 22-year-old G1P1 woman complained of chronic pelvic pain (VAS 4) for two weeks before admission. The patient had a history of spontaneous labor two month earlier and then had an IUD insertion in the puerperal period. On transvaginal US examination, the IUD was not visible in the uterine cavity but in the pelvic cavity a hyperechoic elongated structure was seen suspicious of an extrauterine IUD location. Diagnostic hysteroscopy was performed followed by laparoscopy. On hysteroscopic view there were no IUD or IUD threads visible in the uterine cavity. Laparoscopy showed that the IUD string was attached to the omentum and the IUD rods imbedded in the anterior peritoneum. The uterus and both adnexa were normal. Adhesiolysis was performed between the omentum and the anterior peritoneal wall until the IUD could be completely removed. The IUD and omentum then were removed from abdominal cavity. One day postoperatively, the patient was in good condition and was discharged.

Conclusion :

Extrauterine IUD translocation is rare complication of the IUD insertion. Laparoscopic removal is the procedure of choice which has proven to be highly successful in the removal of IUD translocations.

006-PSTR Scoping Review of High-Intensity Focused Ultrasound (HIFU) Procedure in Adenomyosis.

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Introduction:

Adenomyosis is a gynecological disease characterized by ectopic endometrial tissue in the myometrium which often occurs in women of reproductive age, between 30-40 years. The prevalence of adenomyosis currently ranges from 20-35%. The patient's main clinical symptoms include abnormal uterine bleeding, menstrual pain (dysmenorrhea), and impaired fertility (infertility). The pathological mechanism for the occurrence of adenomyosis is an imbalance of steroid hormones, a local inflammatory process that causes changes in cell proliferation which may lead to neuro angiogenesis in myometrial tissue (1,4). Current therapy for adenomyosis includes oral medications, progesterone, contraceptive pills or anti-inflammatory pills as well as GnRH Agonist injections and adenomyomectomy that can be performed by conducting minimally invasive

laparoscopic surgery/laparotomy surgery (5). Surgical removal of the uterus (hysterectomy) is the main option for women who no longer want children, but hysterectomy for adenomyosis that occurs in infertile couples is not a good choice for women who still want children. Although UEA treatment can improve patient symptoms, its effect on ovarian function and pregnancy is still uncertain (4,5).

High Intensity Focused Ultrasound (HIFU), an emerging non-invasive surgical technique for the treatment of benign tumors, has been used for adenomyosis since 2008. Under ultrasound or magnetic resonance (MRI) examination, HIFU high intensity ultrasound energy can penetrate the abnormal target tissue and remove the lesion through thermal effects and cavitation and allows the preservation of normal tissue around the lesion. The cavitation process is a condition in which HIFU will create static pressure on the targeted cells so that the liquid in the cells decreases until it is under the pressure of liquid vapor, which results in the formation of bubbles filled with small vapor bubbles in the liquid. The bubble eventually explodes and the liberated gas passes into the surrounding liquid through a mechanism that initially softens and then gets absorbed by healthy body tissue.

In recent years, HIFU therapy has become a viable surgical alternative for patients who still wish to retain their uterus. However, adenomyosis is a disease that is very sensitive to the estrogen hormone, and HIFU therapy will not change the working of hormones in the body. The risk of recurrence therefore still exists. Gonadotrophin Releasing Hormone Agonist (GnRH-A) is a hormone that is commonly used for the treatment of adenomyosis, it lowers estrogen levels to menopausal levels and increase adenomyotic apoptosis in the myometrium.

This chapter provides several systematic reviews and meta-analyses of HIFU combined with GnRH-A in adenomyosis and provides proof-based medical evidence for clinical applications.

Material and methods:

Vannuccini and Petraglia's study that is included in this meta-analysis met the following criteria. It compares HIFU combined with GnRH-a versus HIFU solely in patients with adenomyosis. The HIFU group combined with GnRH-a is defined as the experimental group, the HIFU group itself is defined as the control group. Strubel et al. The objects of the study: (1) women aged 18–50 years; women with focal or diffuse adenomyosis diagnosed by ultrasound, MRI, or computed tomography (CT); patients who have not received any treatment for adenomyosis within 3 months prior to the study. Abbott Outcome indicators: The main outcome indicators are changes in uterine volume while adenomyotic lesions are defined as the main outcome. The secondary outcomes are the visual analog scale (VAS) score for dysmenorrhea, menstrual volume score, serum CA125 level, and recurrence rate. The exclusion criteria for the inclusion of studies in this report are the following: animal experiments, case reports, conference abstracts, conference proceedings, editorial letters, guidelines or comments; repeated study; studies in which the full text is not available; patients with uterine fibroids or other gynecological diseases, whose clinical symptoms are similar to adenomyosis and study less than 3 months HIFU after ablation.

Results:

Of the 390 articles, 9 studies were retained with data of 766 patients analyzed in this meta-analysis (11-19). Of the nine studies, one of them was using MRI for the imaging diagnosis of adenomyosis, six were using transvaginal ultrasound or MRI, and the other two did not report specific imaging diagnostic methods. Although these studies provide information about the diagnostic imaging methods used, they do not provide specific imaging criteria for the diagnosis of the adenomyosis.

Changes in the physiology of adenomyosis

1. Changes in uterine volume

Among the nine studies included, only three reported a method of generating random-location sequences, which was the random number table method. The analysis demonstrated the change of

Uterine Volume as the rate of uterine volume reduction after HIFU in 232 patients. The results of the meta-analysis showed that the rate of uterine volume reduction in the HIFU group with GnRH-a was higher than that in the HIFU only group at 12 months after the procedure (13,20).

2. Changes in volume of adenomyotic lesions

Three studies (239 cases) reported changes in lesion size before and after HIFU ablation which showed that the volume of the lesions in the experimental group was smaller than that in the control group in 3 and 6 months after the procedure. Although the results of the study showed no significant difference in both groups ($p > 0.05$) (11,12,17).

3. VAS Score for Dysmenorrhea

A total of five studies (367 cases) used VAS to assess patient with dysmenorrhea. The results of the meta-analysis showed that the VAS score for dysmenorrhea in the HIFU group with GnRH-a was lower than the HIFU group alone after the procedure (11,13,14,17,18).

4. Menstrual Volume Score

Three studies (243 cases) used the menstrual volume score to assess menstrual bleeding. The results of the meta-analysis showed that the menstrual volume score of the HIFU group with GnRH-a was lower than that of the HIFU group itself after the procedure (14,16,19).

5. Levels of Serum CA125

Three studies (252 cases) evaluated patients' levels of serum CA125. The results of the meta-analysis showed that serum CA125 levels in the HIFU group with GnRH-a were lower than the HIFU group alone after the procedure (11,17,18).

6. Recurrence Rate

Three studies (314 cases) compared the recurrence rates in the experimental and control groups. The results of the meta-analysis showed that the relapse rate in the HIFU group with GnRH-a was lower than that in the HIFU group itself (15,16,19).

7. Pregnancy Outcome

One study reported patient pregnancy outcomes at 6 months after treatment. There were five pregnancies reported after the HIFU intervention combined with GnRH-a ($n = 45$), three of which delivered naturally and two ended in abortion. In the HIFU only group ($n = 46$), there were four reported pregnancies following HIFU ablation, one resulting in natural delivery, one resulting in miscarriage and two ending in abortion.

Table 1 Characteristics of Studies

Resear chers	Research Design	Data	Resear ch Groups	Control Group	Numbers of Responde nts	Age of Respon dents	Follow up	Diagnostic Examinati on	Total Energy	Average of Power
Yang and Xie	Retrospective	Random	HIFU+ GnRH-A	HIFU	38	41,6±6,3	12	USG MRI	TV/ NA	NA
Guo et al	Prospective	NA	HIFU+ GnRH-A	HIFU	45	41,6±4,7	12	USG MRI	TV/ 398,26±0,39	392,79 ± 63,3
Jiang et al	Prospective	NA	HIFU+ GnRH-A	HIFU	46	40,6±4,4	3	USG MRI	TV/ 298,26±2,66	294,32 ± 7,3
Xu et al	Retrospective	Random	HIFU+ GnRH-A	HIFU	42	38,3±7,3	12	USG MRI	TV/ NA	50-400
Guo et al	Prospective	NA	HIFU+ GnRH-A	HIFU	55	41,0±4,7	6	MRI	298,26±2,66	350-400
Xio-Ying et al	Retrospective	Random	HIFU+ GnRH-A	HIFU	38	41,6±6,3	12	USG MRI	TV/ 398,2 ± 0,3	392,7 ± 63
Yang et al	Retrospective	Random	HIFU+ GnRH-A	HIFU	40	40,6±5,3	12	NA	NA	NA

Discussion:

The results of the data of this meta-analysis from 766 patients showed that, HIFU combined with GnRH-a compared to the HIFU only group, for the treatment of adenomyosis had greater effectiveness in reducing uterine volume and adenomyotic lesions and alleviating symptoms. Adenomyosis is a common and difficult gynecological disease that seriously affects women's health and quality of life. Effective symptom relief, relapse prevention, and increased pregnancy rates are problems that must be solved. Compared to currently available therapies, HIFU is a non-invasive and innovative technology for adenomyosis while still at risk of recurrence.

The working mechanism of HIFU resides in producing thermal and cavitation effects that are altered by the mechanical effects of ultrasound causing the target tissue temperature at of the focal point to rise above 60–100°C, causing non-coagulation thermal necrosis lesions. At the same time, the surrounding structures are not damaged. Previous studies found that uterine smooth muscle tissue in adenomyotic lesions was sensitive to HIFU. HIFU treatment was an effective and ideal treatment for adenomyosis. A retrospective study by Lee et al. enrolled 889 patients with adenomyosis who underwent ultrasound-guided HIFU (USgHIFU). The results revealed that the uterine volume reduction rate was 60.1% at 3, 6, and 12 months after the procedure, respectively. This was consistent with the results of a recent systematic and meta-analysis showing a substantial effect in reducing uterine volume after HIFU treatment for adenomyosis in 12 months (20).

GnRH-a therapy can effectively relieve pain in adenomyosis patients by reducing regulation of GnRH receptors in the body, thereby reducing the level of gonadotropins secreted by the pituitary gland which results in decreased ovarian function.

HIFU combined with GnRH-a can help maintaining the effect of HIFU therapy and reduce relapse rates. Most of the studies involved, suggest that patients should be given GnRH-a three times after HIFU ablation. The first GnRH-a is given on the first to third day of the first menstruation after HIFU therapy. Then, the interval between the two GnRH-a injections is within 28 days.

The results of the existing study show that the symptoms of both groups are all improved after the procedure, but the VAS or dysmenorrhea scores and menstrual volume scores in the HIFU group combined with GnRH-a are lower than in the HIFU only group. The levels of serum CA125 are also decreased. Although the results of the VAS score for dysmenorrhea show that HIFU combined with GnRH-a can better alleviate dysmenorrhea in each patient, there wis still excessive heterogeneity.

The relationship between adenomyosis and infertility is not clear, but adenomyosis can affect a woman's fertility, this is mainly related to disruption and thickening of the myometrial junctional zone (JZ), and hypo-acceptability of the endometrium. In recent years, due to the continuous improvement of various ultrasound diagnostic methods and the increasing age of women seeking infertility treatment, the rate of women with a diagnosis of adenomyosis among infertile women has increased. Traditionally, infertile patients with adenomyosis are treated with GnRH-a or they may have adenomyosis (adenomyomectomy) removed surgically. Studies have shown that HIFU is a safe and effective procedure for infertile women and it does not increase obstetric risk (21).

Conclusion:

The results of this meta-analysis show that compared with HIFU only treatment the HIFU accompanied by GnRH-a therapy used on adenomyosis, obtained a greater level of effectiveness in reducing uterine volume and adenomyotic lesions and alleviating symptoms. However, because the number of studies included is too small, further research that has a long-term evaluation is needed.

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007-PSTR The value of Truscreen (an artificial intelligence cervical cancer screening system) in high-risk HPV positive patients.

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Objective:

To investigate the value of artificial intelligence cervical cancer screening system TruScreen (TS), an artificial intelligence cervical cancer screening system in high-risk human papillomavirus (HPV) positive patients in real clinical environment.

Methods:

318 patients with high-risk HPV positive in the gynecological clinic of our hospital from May 2020 to June 2021 were analysed retrospectively. Colposcopy was performed when there were colposcopy referral indications.