Total Laparoscopic Hysterectomy versus Total Abdominal Hysterectomy in Women with Endometrial Neoplasia; Randomized Controlled Clinical Trial

Thesis

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By

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Rania Gamal Anwar Elskaan

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List of Abbreviations

Abb.	Full term

AH.....: Atypical hyperplasia.

BSO.....: Bilateral salpingo-oophrectomy.

CHTH .....: Chronic hypertension.

CI .....: Confidence interval.

CLD .....: Chronic liver disease.

CO2.....: Carbon dioxide.

CONSORT.....: CONsoildated Standards of Reporting Trials.

DM .....: Diabetes mellitus.

DVT.....: Deep venous thrombosis.

EB .....: Endometrial biopsy.

EC .....: Endometrial cancer.

EH.....: Endometrial hyperplasia

EIN .....: Endometrial intraepithelial neoplasia.

ER .....: Estrogen receptor.

FIGO.....: International Federation of Gynecology and Obstetrics.

GI .....: Gastro intestinal.

Hb .....: Hemoglobin

Hct.....: Hematocrit

HCV .....: Hepatitis C virus.

L.N.....: Lymphadenectomy.

LAVH.....: Laparoscopic-assisted vaginal hysterectomy.

LH.....: Laparoscopic hysterectomy.

List of Abbreviations (Cont...)

Abb.	Full term
LNG-IUS	*Levonorgestrel releasing intrauterine system*
LSH	*Laparoscopic subtotal hysterectomy.*
MPA	*Medroxy progesterone acetate.*
MRM	*Modified Radical Mastectomy.*
NO.	*Number.*
NS	*Non-significant.*
PCO	*Polycystic ovary syndrome.*
PR	*Progesterone receptor.*
QoL	*Quality of life improvements.*
RCT	*Randomized controlled trial.*
S	*Significant*
SD	*Standard deviation.*
TAH	*Total abdominal hysterectomy.*
TLH	*Total laparoscopic hysterectomy.*
UPSC	*Uterine Papillary serous caecinoma.*

Abstract

Background: Laparoscopic hysterectomy is one of minimally invasive surgery in the management of endometrial neoplasia and its safety and efficacy with nearly the same rate of complications, less intraoperative blood loss and less postoperative pain. **Aim of the Work:** to compare operative time between total laparoscopy hysterectomy with bilateral salpingoophrectomy (TLH+BSO) versus total abdominal hysterectomy and bilateral salpingooophorectomy (TAH+BSO) in women with endometrial neoplaia. **Patients and Methods:** The current study was conducted in Ain-Sham University Maternity Hospital during the period between January 2017 to May 2018. It included a total number of 52 women recruited from outpatient gynecology clinic. All were complaining from premenopausal or postmenopausal bleeding and diagnosed as having endometrial hyperplasia or endometrial carcinoma. **Results:** On comparing both groups, there was no significant difference between total operative time between both groups but, TLH with BSO had more prolonged operative time than TAH with BSO, there were significant decrease in intraoperative blood loss, post-operative pain and less post-operative pelvic pain in TLH group. There were no significant result regarding intra or post-operative complications, need for blood transfusion, hospital stay and post-operative return to daily activities or sexual satisfaction. TLH group had 2 cases with intra operative complications and 5 cases with post-operative complications. TAH had 2 cases of major complications and 1case of postoperative complication.**Conclusion:** Laparoscopic hysterectomy proved safety and efficacy in the management of endometrial neoplasia either endometrial hyperplasia or malignancy with no significant difference regarding operative time with less intraoperative blood less and postoperative pain with same rate of complications as abdominal route.

Key words: total laparoscopic hysterectomy, total abdominal hysterectomy, endometrial neoplasia

INTRODUCTION

Minimally invasive surgery has progressed in many surgical disciplines over the last three decades in gynecologic oncology, and the ability to perform complete laparoscopic staging procedures have allowed minimally invasive surgery to serve a greater role in the treatment of women with gynecologic cancers ***(Schlaerth et al., 2006).***

Endometrial hyperplasia (EH) is a pre-cancerous, non-physiological, non-invasive proliferation of the endometrium. Currently, the incidence of EH is indistinctly reported to be around 200, 000 new EH cases per year in Western countries ***(Ozdegirmenci et al., 2011).***

The treatment of endometrial hyperplasia depends on its type, if simple endometrial hyperplasia medical, treatment usually is enough e.g. progesterone therapy (Medroxy progesterone acetate and Levonorgestrel), Danazole, Genistine and GnRH. If complex endometrial hyperplasia, start by medical treatment, if no response, surgical intervention is the rule. If atypical hyperplasia, medical treatment in premenopausal female, hysterectomy with no response to medical treatment or post-menopausal women either by abdominal approach or laparoscopic approach ***(Chandra et al., 2016).***

Since EH can progress to endometrial carcinoma, surgery "Hysterectomy with bilateral salpingoophrectomy" is favored in most women with complex EH with atypia if they have completed childbearing, do not desire preservation of their fertility or do not respond to hormone therapy. Other surgical options have been widely reported as common treatment for EH, such as thermal balloon ablation, laser therapy or resectoscopic surgery ***(Chandra et al., 2016).***

Endometrial cancer is the third most common cancer in women in Western countries, accounting for 6–9% of their cancers, with a peak incidence at the age of 55–65 year "about 90% of cases". The incidence increases in obese women and 70% of the patients have a high body mass index (BMI >25k.g\m^2) and 50% have co-morbidity such as diabetes and cardiovascular disease. A total of 75% of the patients are diagnosed with stage I disease **(*Obermair et al., 2005).***

Traditionally standard treatment for patients with early stage (stage 1&2) endometrial cancer (EC) is total abdominal hysterectomy and bilateral salpinoophorectomy (TAH+BSO) with or without lymph node dissection through a Pfannenstiel incision. While TAH is an accepted effective treatment, it is highly invasive, visibly scarring and associated with adverse events such as blood loss and wound problems ***(Manolitsas and McCartney, 2002).***

Efforts to reduce the perioperative morbidity of total abdominal hysterectomy for patients with early stage disease (stage 1&2) are by laparoscopic hysterectomy ***(Aalders et al., 1980 and Keys et al., 2004).***

Total laparoscopic hysterectomy (TLH) is a laparoscopic hysterectomy in which surgical dissections, ligations till ligation of uterine artery are done laparoscopically ***(O'Hanlan et al., 2007)***.

Laparoscopy in early stage endometrial cancer is a minimal invasive technique compared to the standard approach by laparotomy. In several retrospective and prospective studies it has been shown that the laparoscopic approach is an effective and safe alternative to the open procedure. Most of these studies show a significant reduction in treatment related morbidity, with shorter hospital stay, less pain and quicker return to activities in daily life with the laparoscopic approach compared to laparotomy ***(Aalders et al., 1980 and Keys et al., 2004).***

Despite the potential benefits of laparoscopic hysterectomy for endometrial cancer, a number of questions remain unanswered. First, data suggest that adoption of laparoscopy has been slow because some patients do not have access to the technology. Second, the majority of data reported have come from highly experienced surgeons and centers. Although informative, the same results may not be generalizable when the procedure is performed by less experienced surgeons ***(Wright et al., 2012).***