The Effect of Caffeine on Bowel Movement after Abdominal Hysterectomy

Thesis

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By

Rana Wagdy Mohamed Ahmed

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Under Supervision of

Prof. Dr. Walid Hetler Ahmed

Professor of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University

Prof. Dr. Hosam Mohamed Hemeda

Professor of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University

Dr. Kareem Mohamed Labib

Assistant Professor of Obstetrics and Gynecology
Faculty of Medicine – Ain Shams University

Faculty of Medicine
Ain Shams University
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Rana Wagdy

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List of Abbreviations

Abb.	Full term
AF	*Arterial Fibrillation*
AFB1	*Aflatoxin B1*
AH	*Abdominal Hysterectomy*
B[a]P	*Benzo[a]Pyrene*
BP	*Blood Pressure*
C+K	*Cafestol and Kahweol*
CNS	*Central Nervous System*
DMBA	*Dimethylbenz[a]Anthracene*
GI	*Gastrointestinal*
GIT	*Gastrointestinal Tract*
IVP	*Intravenous Pyelogram*
LAVH	*Laparoscopic Assisted Vaginal Hysterectomy*
LH	*Laparoscopic Hysterectomy*
mTOR	*Mammalian Target of Rapamycin*
p-mTOR	*Phosphorylated mTOR*
STAH	*Subtotal Abdominal Hysterectomies*
TVH	*Total Vaginal Hysterectomy*
VH	*Vaginal Hysterectomy*

ABSTRACT

Background: Postoperative bowel paralysis is common after abdominal operations, including total abdominal hysterectomy. Which tends to prolong the duration of hospital stay. A recent study showed that consumption of regular coffee after total abdominal hysterectomy is associated with a significantly faster resumption of intestinal motility. **Aim of the Work:** to asses the effect of caffeine on bowel movement after total abdominal hysterectomy. **Patients and Methods:** The current study is cross sectional case control, that was held in Ain Shams University Maternity Hospital. The aim was to compare between effect of coffee on bowel movement after total abdominal hysterectomy. This study included 80 women after total abdominal hysterectomy, the mean(SD) of age 45.1±2.9 years. **Results:** In our study first passage of flatus in intervention group occurred 4 hours earlier than control group. The first defecation in our study showed significant difference in the two groups which occurred 4 hours earlier in intervention group than control group. **Conclusion:** Our results indicate that consuming coffee after total abdominal hysterectomy contributes to significant to faster restoration of intestinal function.

Keywords: Caffeine - Bowel Movement - Abdominal Hysterectomy

INTRODUCTION

Postoperative bowel paralysis is common after abdominal operations, including total abdominal hysterectomy.. Which tends to prolong the duration of hospital stay. A recent study showed that consumption of regular coffee after total abdominal hysterectomy is associated with a significantly faster resumption of intestinal motility ***(Kehlet et al., 2008).***

Postoperative care after total abdominal hysterectomy, particulary gastrointestinal system care, is highly important. Ileus is a major gastrointestinal complication following abdominal surgeries that cause impaired intestinal motility and may persist between 2 to 5 days. Ileus gives rise to many complications and is a primary determinant of post-surgery in-hospital stay ***(Delaney et al., 2004).***

Ileus initiates variety of symptoms such as abdominal distention, pain, intolerance to oral diet, dependence on parenteral nutrition, and prolongs hospital stay while imposing large economic burden on national healthcare system ***(Holte et al., 2000).***

Hysterectomy is the gynecologic surgery most frequently performed worldwide. Hysterectomy is surgery to remove the uterus, the most common benign indication for hysterectomy include uterine leiomyomas, adenomyosis, abnormal uterine bleeding, endometriosis and uterine prolapse ***(Conrad et al., 2015).***

A host of treatment have been used in clinical trials to prevent or alleviate duration of postoperative ileus, including medications for intestinal motility, early feeding and use of liquids a few hours after surgery, physical treatments, early mobilization, avoiding nasogastric tube, and spinal anesthesia ***(George et al., 2008).***

Coffee is a popular global drink and positively affects human body including central nervous system, and the cardiovascular system, and improves one's sense of well-being.Gastrointestinal system can be stimulated by food with substantial caloric content, acidity, osmolarity, or volume load ***(George et al., 2008).*** Cohn showed that consumption of coffee in young adults has positive on intestinal motility ***(Brown et al., 1990).***

Similarity, Muller performed a randomized clinical trial and reported that coffee accelerates postoperative bowl movement ***(Muller et al., 2012).***

Aim of the Work

The study aims to asses the effect of caffeine on bowel movement after total abdominal hysterectomy.

Chapter 1

HYSTERECTOMY

Historical background of hysterectomy:

The first authenticated description of removal of the uterus through the vagina was given by Berengarius of Bologna, in 1507 ***(Senn, 1895).***

Instances of partial or complete removal of the uterus carried out by a midwife were reported by ***Hildanus (1646); Senn (1895); Bernhard (1802) and Wrisberg (1787).***

The first deliberate and well planned vaginal hysterectomy for carcinoma was performed in 1813 by Langenbeck, of Gottingen. Wrisberg's paper and paletta's case report encouraged him to undertake this difficult task. His patient was a multiparous 50 year old women. On examination, there was some uterine prolapse and the cervix was found to be hard, nodular. Between 1822 and 1830, a further 11 vaginal hysterectomies were undertaken by various surgeons, including Langenbeck ***(Senn, 1895).***

The early pioneers of the operation thus established the basic premise of the procedure, which with some modification, is what is undertaken in modern practice ***(Olah, 2004).***

Surgery in the late 19th century was associated with high morbidity and mortality, and was not performed unless absolutely necessary. In 1885, A Reeves Jackson stated: '

Vaginal hysterectomy does not avert or lessen suffering; it destroys, and does not save, life. It is, therefore, not a useful but an injurious operation; and being such, it is unjustifiable, and ought to be abandoned ***(Jackson, 1885).***

Before the turn of the century, brilliant French surgeons were most successful with the use of clamps and developed remarkable morcellation and bisection techniques ***(Sheth, 1993).***

The famous French surgeon Doyen insisted in 1939 that "no one could call themselves a gynaecologist until he had performed a vaginal hysterectomy "in private" ***(Green- Armytage, 1939).***

The first reported abdominal hysterectomy was tempted by Langenbeck in 1825 ***(Bottle et al., 2005).***

More than 600,000 hysterectomies are performed annually in the united states, and more than one third of women have undergone the procedure by the age of 60 years ***(Whiteman et al., 2008).***

In the 2000-2004 National Hospital Discharge Survey, abdominal hysterectomies accounted for about two-third of the procedures, and approximately one-third of the vaginal hysterectomies were performed laparoscopically. The most common indications for hysterectomy were uterine leiomyoma, endometriosis, and uterine prolapse ***(Whiteman et al., 2008).***

The first reported abdominal hysterectomy was tempted by Langenbeck in 1825 ***(Bottle et al., 2008).***

The first total laparoscopic hysterectomy (TLH) reported by ***Reich et al. (1989),*** many investigators and surgeons have demonstrated that this technique is feasible and reproducible ***(Chapron et al., 2002).***

Hysterectomy rates:

Total abdominal hysterectomy remains the predominant route utilized, by the majority of gynecologists; however recently a resurgence of subtotal abdominal hysterectomy has been reported. The Danish National Patient ***Register (2001)*** reported a 14% increase for the surgical treatment of benign uterine disease ***(Settnes and Tabor, 2001).***

The number of total abdominal hysterectomies (TAH) decreased by a factor of 38%; however, the number of subtotal abdominal hysterectomies (STAH) increased by 458% over the same 11-year study period. Abdominal hysterectomy still accounted for 80% of the total hysterectomies in Denmark in the final year of the study.the reasons for the increased frequency of subtotal abdominal hysterectomy (STAH) are unclear, but may be based on suppositions related to female sexual response as well as the facilitations of laparoscopic hysterectomy techniques ***(Michael, 2005).***

Types of hysterectomy:

- ***Abdominal hysterectomy:***

Abdominal hysterectomy is a very common surgical procedure. In the United States, more than half a million women undergo hysterectomy each year, and it is estimated that by age 65, one third of women in this country will have had their uterus surgically removed ***(Carlson et al., 1994 & Garry et al., 2004).***

The types of abdominal hysterectomies:

Total hysterectomy:

Involves removing both the body of the uterus and the cervix, which is the lower part of the uterus.

Total Abdominal Hysterectomy with bilateral salpingo oophorectomy: involves removing the uterus, cervix, bilateral fallopian tubes, and ovaries ***(Clayton, 2006).***

Most gynecologists would agree that a uterus larger than 12 weeks gestational size to qualify for an abdominal approach. The shape and the size of pelvic outlet are also key factors; although the degree of prolapse is not a absolute factor, patients with limited uterine prolapse are more difficult to do trans vaginally. Cervical fibroid or cervical enlargement for any reason may compromise vaginal exposure and make it difficult to place clamps laterally ***(Alessandri et al., 2006).***