Elective Cesarean Section Without Urethral Catheterization

Thesis
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إجراء العمليات القيصرية الانتخابية بدون استخدام القسطرة البولية

رسالة توطئة
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مقدمة من

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Summary and Conclusion

Catheterization of urinary bladder prior to cesarean section is a long-standing practice that has been continued for a long time without being subjected to critical evaluation **(Senanayake, 2005).**

The main idea for catheterization is the belief that empty bladder is at less risk of damage during surgery than a distended one. A distended bladder is also expected to interfere with exposure of surgical field which makes surgery more difficult **(Senanayake, 2005).**

The main disadvantage of catheterization is the increased risk of urinary tract infection (UTI) **(Schwartz, 1999).**

Although the dictum that, the bladder should be catheterized in order to protect it from intraoperative injury, it could be said that a slightly filled bladder may be better demarcated, more easily identified and less vulnerable to injury. Even in the case of accidental cystotomy, urine will flow out from site of injury drawing attention to the damage. This would be more reliable and an earlier indicator of cystotomy than the other indirect methods such as postoperative haematuria **(Senanayake, 2005).**

This study compares between the rates of UTI in elective cesarean sections with and without urethral catheterization. This

List of Abbreviations

ACOG	American College of Obstetrics and Gynecology
Cm	Centimeter
CS	Cesarean section
E. coli	Escherichia coli
Fg.	French gauge
Fig.	Figure
HS	Highly significant
IVP	Intravenous pyelogram
NE	Not estimable
NS	Non-significant
SD	Standard deviation
SPSS	statistical program for social science version 12
THP	Tamm-Horsfall protein
UPEC	Uropathogenic Escherichia coli
UTI	Urinary tract infection
VUF	Vesico-uterine fistula
VVF	Vesico-vaginal fistula
WBCs	White blood cells

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بسم الله الرحمن الرحيم

قَالُوا سُبْحَانَكَ لاَ عِلْمَ لَنَا إِلاَّ مَا
عَلَّمْتَنَا
إِنَّكَ أَنتَ الْعَلِيمُ الْحَكِيمُ

صدق الله العظيم

البقرة الآية ٣٢

Introduction

Catheterization of urinary bladder prior to cesarean section is a long-standing practice that has been continued for a long time without being subjected to critical evaluation **(Senanayake, 2005 and Tang et al., 2005).**

The rationale for catheterization is the belief that empty bladder is at less risk of damage during surgery than a distended one. A distended bladder is also expected to interfere with exposure of surgical field which makes surgery more difficult. The catheter is either removed at the end of cesarean section or left insitu for a varying period of time to avoid urine retention **(Arulkumaran et al., 1986).**

The main disadvantage of catheterization is the increased risk of urinary tract infection (UTI) **(Nasr et al, 2009; Bartzen and Hafferty, 1987).** Continuation of drainage postoperatively will further increase the risk of UTI and delay mobilization by contributing to patient discomfort. "Distress catheterization" for postoperative urine retention also increases risk of urinary tract infection **(Tangtrakul et al., 1994).** UTI is the most common complication of cesarean section **(Leigh et al., 1989).**

Rates of UTI in cesarean section range between 1.7 and 31.4 % **(Tangtrakul et al., 1994).**

The lower figure was reported by **(Bartzen and Hafferty, 1987)** whose series involved avoidance of catheterization. The increased incidence of UTI with Cesarean section is almost entirely due to catheterization **(Schwartz et al., 1999).** Now it is clear that the best way to prevent UTI after cesarean section is the avoidance of urinary catheter

Previous studies have discussed the various aspects of carrying out cesarean section without urinary catheterization. **Bartzen and Hafferty, 1987** conducted a retrospective study of 949 pelvic laparotomies which included cesarean sections without urinary catheterization. They concluded that the use of an indwelling catheter was not necessary to obtain adequate exposure or to prevent postoperative urine retention. However they needed to drain the bladder in 12 % of cesarean sections. They also noticed that if a woman had voided satisfactorily before cesarean section, drainage was rarely needed to achieve proper exposure. A similar result had been made by **(Barnes, 1998).**

It is important to know that the incidence of postoperative urine retention is low with complete avoidance of catheterization on the contrary to what would be expected **(Senanayake, 2005).**

Although the dictum that, the bladder should be catheterized in order to protect it from intraoperative injury, it could be said that a slightly filled bladder may be better demarcated, more easily identified and less vulnerable to injury. Even in the case of accidental cystotomy, urine will flow out from site of injury drawing attention to the damage. This would be more reliable and an earlier indicator of cystotomy than the other indirect methods such as postoperative haematuria **(Senanayake, 2005).**

Aim of the Work

The objective of this study is to investigate prospectively the safety of avoiding urinary catheterization prior to elective cesarean section and possible effects regarding:

1. Incidence of postoperative UTI.
2. Intraoperative problems.
3. Postoperative urine retention.