

## AUDIT OF GYNAECOLOGICAL LAPAROSCOPIES IN NATIONAL HOSPITAL ABUJA, NIGERIA

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### ABSTRACT

**Context:** The scope of laparoscopy is increasing in contemporary gynaecological practice. There is scanty data on gynaecological laparoscopy in Nigeria.

**Objective:** To determine the rate, indications, perioperative characteristics and complications of gynaecological laparoscopy at National Hospital, Abuja.

**Study Design, Setting and Subjects:** A retrospective review of gynaecological laparoscopies performed at the National Hospital, Abuja, Nigeria over a four year period (2001-2004).

**Results:** There were 58 gynaecological laparoscopies during the study period, and a rate of 28.7 laparoscopies per 1000 gynaecological operations. The incidence is low due to occasional logistic problems with the equipment and multiple strike actions by health workers. The procedure was done wholly for diagnostic purposes, the major indication being infertility in 88.9% of the patients. Majority (54.9%) of the patients had the procedure performed during the luteal phase of their menstrual cycle, as opposed to the proliferative phase. The procedure was performed by consultants or senior residents in 50 (98%) of the patients. All the patients had general anaesthesia for the laparoscopies. There was no major complication or operative mortality in the patients whose case folders were analysed.

**Conclusion:** The gynaecological laparoscopy rate is low, at 28.7 per 1000 gynaecological operations; it was done mainly for elective and diagnostic purposes, the major indication being infertility and it was generally safe with absence of major perioperative or postoperative complications.

**Key Words:** Audit, gynaecology, laparoscopy

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### INTRODUCTION

Laparoscopy is direct visualization of the peritoneal cavity, ovaries, outside of the tubes and uterus using a laparoscope. A laparoscope is an instrument similar to a miniature telescope utilizing fibre-optics to convey light into the abdomen and pelvis. Traditionally, laparoscopy has been an endoscopic procedure carried out in gynaecology to investigate the abdominal and pelvic organs for a variety of indications. These include tests of tubal patency, chronic pelvic pain, menstrual abnormalities and investigation of abdominal or pelvic masses. Recently laparoscopy has become more involved in the management of certain gynaecological conditions such as ovarian cysts, uterine fibroids, ectopic pregnancies, endometriosis and gynaecological malignancies. This has led to the concept of minimal-access surgery and broadened the frontiers of laparoscopy and other endoscopic

Procedures generally in gynaecology, leading to a whole new range of applications. National and institutional data concerning gynaecological laparoscopy are mainly from developed countries<sup>1-5</sup>. Review of the literature locally revealed scanty data nationally. At the recently concluded 39<sup>th</sup> annual and scientific conference of the Society of Gynaecology and Obstetrics of Nigeria (SOGON) held in Ibadan from 22<sup>nd</sup> to 25<sup>th</sup> November, 2005, it was revealed that a good number of centres do not have laparoscopic equipment or they are non-functional. A centre actually has resorted to performing minilaparotomy for diagnostic purposes, in the absence of laparoscopy<sup>6</sup>. The National Hospital, Abuja is the only tertiary health facility in the municipality of Abuja and was established in October 1999. Laparoscopy operations actually commenced in the middle of the year 2000 due to logistic problems. With the increasing scope of application of laparoscopy, this study was carried out to determine the rate of gynaecological laparoscopy, the indications for, timing of the procedure,

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anaesthesia administered, frequency and type of complications encountered at the National Hospital, Abuja, Nigeria.

## METHODOLOGY

This was a retrospective study of gynaecological laparoscopies performed at the National Hospital, Abuja from 1<sup>st</sup> January 2001 to 31<sup>st</sup> December 2004. The case folders of patients who had laparoscopy were retrieved from the medical records department using the records register in the operating theatre. The age and parity, indications for, menstrual cycle timing, type of anaesthesia administered, frequency and type of complications encountered were obtained from the case folders. The total number of gynaecological operations during the study period was also obtained from the operating theatre register. This paper reports on the 51 women who had laparoscopy during the study period and whose case folders were obtained.

## RESULTS

There were a total of 58 recorded gynaecological laparoscopies during the study period and a total of 2019 gynaecological operations during the study period. This gives a rate of 28.7 laparoscopies per 1000 gynaecological operations. However, due to omissions and errors in the recording process, the folders of 7 patients could not be traced. Analysis of data in this paper is therefore based on the 51 patients whose files were obtained. The age and parity distributions of the 51 women are shown in Table 1. Twenty (39.2%) of the patients were within the 20-29 age group, while 28 (54.9%) were in the 30-39 age group. Most patients were of low parity. Patients who were Para 0 contributed 56.8% of the total. Laparoscopy was performed in the majority (88.9%) of patients with infertility. Other indications for the procedure were for chronic pelvic pain, suspected ectopic pregnancies and amenorrhoea, accounting for 5.6%, 3.7% and 1.8% of the patients respectively. Multiple indications of chronic pelvic pain and infertility were present in 3 patients. This accounted for the total being greater than 51. This is shown in Table 2.

The majority (54.9%, n=28) of the patients had the procedure performed during the luteal phase of their menstrual cycle, as opposed to the proliferative phase (43.1%; n=22). The procedure was performed by doctors of Consultant or Senior Registrar grade in 50 (98%) of the patients. One patient was operated upon by a Registrar under supervision. All the patients had General Anaesthesia for the laparoscopies. Thirty-six patients (70.6%) were anaesthetized with the use of cuffed orotracheal tubes while 15 patients (29.4%) had general anaesthesia through the use of laryngeal mask airways. There was no operative mortality in

the 51 patients who underwent laparoscopy. However, one patient reported symptoms, with signs detected of pelvic infection 4 days after the surgery. She responded well to second generation oral cephalosporins with oral metronidazole.

Table 1: Age and Parity Distributions.

Age	Number (%)
20-29	20 (39.2)
30-39	28 (54.9)
40-49	3 (5.9)
<b>Total</b>	<b>51 (100)</b>
Parity	Number (%)
0	29 (56.8)
1	11 (21.6)
2	5 (9.8)
3	6 (11.8)
<b>Total</b>	<b>51 (100)</b>

Table 2: Indications for Gynaecological Laparoscopy.

Indication	Number	Percentage
Infertility	48*	88.9
Chronic pelvic pain	3*	5.6
Suspected ectopic pregnancy	2	3.7
Amenorrhoea	1	1.8
<b>Total</b>	<b>54*</b>	<b>100</b>

\* The 3 patients with chronic pelvic pain also had infertility

## DISCUSSION

The total number of gynaecological laparoscopies performed appears low for the study period under consideration. However, two main factors contributed to this. Firstly, there were a number of industrial disputes nationwide which affected the turnover of patients for surgery. Secondly, there were some logistic problems with the endoscopic equipment at some periods leading to postponement of laparoscopic procedures.

Gynaecological operations as opposed to gynaecological admissions, was used in calculating the laparoscopy rate in this study. The reason is that laparoscopy was performed for most of the patients (96.1%) on a day-case basis. Therefore using gynaecological admissions would have been less accurate. A prospective study is likely to have resulted in a greater yield in data retrieval, circumventing the problem of non-tracing of case records. Scanty data makes comparison with other centres nationwide difficult<sup>7</sup>. The age and parity distribution agrees with

the finding of other studies that the operation is mainly performed for women in the reproductive age group<sup>7</sup>. However, laparoscopy has broadened in scope and has been applied outside this age bracket, for example in gynaecological malignancies. Laparoscopy can be performed for a variety of indications. The most common indication in this study was infertility and agrees with the finding of Omo-Aghoja and Okonofua in Benin-City<sup>7</sup>. Although hysterosalpingography and laparoscopy are said to be complementary to each other in this clinical condition, laparoscopy is favoured in many fertility centres locally and abroad<sup>8-10</sup>. It is therefore not surprising that laparoscopy was performed for this reason in the majority of cases, even though these patients had previously had a hysterosalpingogram done. Krynicki et al in the U.K. conducted a postal survey to find out the current practice in the UK regarding the methods employed to assess tubal patency<sup>11</sup>. The survey represented an overall view as both gynaecologists and radiologists from secondary and tertiary centres responded. In the responses from radiologists, a hysterosalpingogram was the investigation of choice for both low risk (61%) and high risk women (50%). However in the responses from gynaecologists, in patients with no past gynaecological history, the majority performed a hysterosalpingogram (58%) or hystero contrast sonography (HyCoSy) (14%) whereas in patients in whom pelvic pathology was suspected, most (84%) performed a laparoscopy and dye test. The survey also showed that HyCoSy was performed in only a few centres in the UK. The responses from the majority of gynaecologists were in accordance with the RCOG guidelines. However, still some centres (28%) offered laparoscopy and dye test in low risk women as the primary test for assessing tubal patency. All of the procedures were for diagnostic purposes. It is hoped that with increasing knowledge of the scope of laparoscopy and greater practice of the procedure, more applications for therapeutic purposes will occur. It is noted that laparoscopic sterilization did not feature among the indications for the procedure here, in contrast to the practice in developed countries. Again, it is hoped that with the take-off of the endoscopic unit of the National Hospital, Abuja, laparoscopic sterilization will occur commonly and reduce the need for minilaparotomies for this indication.

Regarding timing of this procedure in this study, majority of the procedures were done in the luteal phase. Laparoscopy should be performed in the proliferative phase of the menstrual cycle mainly to rule out the chance of affecting possible pregnancies. Though some gynaecologists perform the procedure in the luteal phase in order to access ovulation, the authors feel ovulation could be accessed by hormonal means (luteal progesterone assay,

depending on cycle length), thus minimizing the chance of affecting possible pregnancies through luteal phase laparoscopies. All of the patients except one were operated upon by consultants or senior registrars. There are fifteen registrars in the unit and so the rate of performance of this procedure is low among this cadre of doctors, for the purpose of learning, maintenance and improvement of their skills. The use of cuffed oro-tracheal tubes for the maintenance of general anaesthesia in the majority of patients may reflect exercise of caution in protecting the airway on the part of the anaesthetists. Otherwise, laparoscopy is a relatively short procedure and the laryngeal mask airway usually circumvents the pharyngeal discomforts experienced by patients who have undergone intubations. The fact that no serious morbidity or mortality occurred among the patients as seen also in the Benin study<sup>7</sup>, reinforces the belief that with proper training, selection of patients and application of safety precautions, laparoscopy is a relatively safe procedure in gynaecological practice. The number of gynaecological laparoscopies performed during the study period at 58 over a four year period, that is 14.5 per year has implications for the training of residents in performing this surgery, and for improvement of the skill required for enlargement of the scope of the procedure to therapeutic purposes.

We conclude that the gynaecological laparoscopy rate is low, at 28.7 per 1000 gynaecological operations; it was done mainly for elective and diagnostic purposes, the major indication being infertility and it was safe with absence of major perioperative or postoperative morbidities. The take-off of the endoscopic unit in this centre would broaden the scope of this procedure and lead to therapeutic applications.

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