



## CORRESPONDENCE

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# Laparoscopic pelvic adnexal surgery in Nobel Medical College

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## ABSTRACT

**Aim:** To share early experience of gynaecological laparoscopic surgeries for adnexal masses in Nobel Medical College and Teaching Hospital (NMCTH).

**Methods:** This is a observational descriptive study in the Department of Obstetrics and Gynaecology of Nobel Medical College, Biratnagar for one year in 2019-2020. All the patients undergoing laparoscopic pelvic surgeries for adnexal masses were analysed for indication, type of procedure, complications and histopathological diagnosis.

**Results:** A total of 123 laparoscopic surgeries were performed. Preoperative diagnosis in most of the cases was adnexal mass followed by adnexal evaluation for subfertility. The common surgical procedure was cystectomy followed by salpingo-oophorectomy in 80% of cases. The most common histopathological diagnosis was mature cystic teratoma (42; 34%) followed by endometriosis (29; 23.8%) and cystadenoma (25; 20.3%).

**Conclusions:** Adnexal evaluation and surgical treatment were performed with laparoscopy. The common pathologies were mature cystic teratoma, endometriosis and ovarian cystadenomas.

**Keywords:** adnexal mass, dermoid, endometriosis, laparoscopy

## INTRODUCTION

Laparoscopy, a modern surgical technique where small openings are created in abdominal wall to visualize and operate for various pathology in intra-abdominal organs, started early in 1920, initially in animals like dog and later in human in 1910.<sup>1</sup> Gynaecological laparoscopy surgery started in Nepal with tubal ligation in 1971 in Maternity Hospital in Kathmandu and later on evolved to other major gynaecological surgeries.<sup>2</sup> It was started in Nobel medical college (NMCTH) from 2015 and it is evolving day by day. Though there are several advantages of this procedure it is not widely practiced due to high cost in our setup, unavailability of full set of instruments and properly trained staffs. Minimal invasive surgery has become increasingly popul-

ar among both doctors and patients for diagnostic as well as operative laparoscopy. NMCTH is one of the few institutes in eastern Nepal where minimal invasive gynaecological procedure is being regularly performed. This study is aimed to find out different adnexal pathologies in laparoscopic surgery.

## METHODS

This was an observational descriptive study done in Nobel Medical College and Teaching Hospital (NMCTH), Biratnagar, Nepal from 2019/08/18 to 2020/08/17. All patients from emergency ward and gynaecological outdoor consultation requiring laparoscopic surgery were enrolled in this study. Cases requiring morcellator were not enrolled. Ethical approval was taken from eth-

ical review board of the institute. Routine consent form was assured from the patient record.

A routine pre-operative assessment for diagnostic and surgical fitness purpose was done including pelvic ultrasonography, tumour markers and computed tomography of abdomen and pelvis wherever required. All the patients with adnexal mass with normal tumour markers were admitted one day prior to surgery and all the procedures were done under general anaesthesia in the lithotomy Trendelenburg position. Abdomen was opened with 10 mm supra or infraumbilical incision with creation of pneumoperitoneum. Two 5mm handling port were opened in bilateral flank whenever required. Routine post-operative care given including intravenous antibiotics for at least 24 hours followed by oral antibiotics for total 7 days. The patients of diagnostic laparoscopy were discharged after 24 hour and other patients were discharged on 2<sup>nd</sup> or 3<sup>rd</sup> post-operative day and followed from time of admission to minimum 2 weeks till histopathology reports obtained.

## RESULTS

There were 122 cases during one year of study period with age range of 12 to 77 year; and 79% were from 25 to 40 years. [Table-1]

Table-1: Age group distribution (N=122)

Age group (years)	N	%
<20	3	2.5
20-25	12	9.8
25-30	23	18.9
30-35	31	25.4
35-40	24	19.7
40-45	13	10.7
>45	16	13.1

Preoperative diagnosis in most of the cases was adnexal mass (108; 87.8%) followed by evaluation for subfertility (12; 9.8%) and abdomino-pelvic mass (2; 1.1%). The common surgical procedure was cystectomy followed by salpingo-oophorectomy in 80% of cases. [Table-2] Among the dermoid group 71.4% underwent cystectomy and 26.2% salpingo-oophorectomy while in the endometriotic group only 48.3% underwent cystectomy and 31% salpingo-oophorectomy.

Table-2: Types of surgery performed (N=122)

Types of surgery	N	%
Laparoscopic cystectomy	71	57.7
Lap. Salpingo-oophorectomy	28	22.8
Diagnostic laparoscopy	8	6.5
Tubal ligation	6	4.9
Myomectomy	4	3.3
Puncture of cyst	3	2.4
Laparoscopic oophorectomy	2	1.6

The most common histopathological diagnosis was mature cystic teratoma (42; 37.2%) followed by endometriosis (29; 25.7%) and cystadenoma (25; 22.1%). Nine patients lost for follow up and histopathology report could not be retrieved from lab. [Table-3]

Table-3: Histopathology report (N=113)

Histopathology	N	%
Mature cystic teratoma	42	37.2
Endometriosis	29	25.7
Cystadenoma mucinous	14	12.4
Cystadenoma serous	11	9.7
Tubal block	6	5.3
Cystic corpus luteum	4	3.5
Fibroid	4	3.5
Granulosa cell tumor	1	0.9
Para tubal cyst	1	0.9
Ectopic	1	0.9

Mean age of the patients with diagnosis dermoid was 35±8.9 years and that for the endometriosis was 30.97±7.6 where 47.7% (20) of dermoid and 58.6% (17) of endometriosis falls under the age group of 25-35 years.

Intraoperatively 18 patients needed blood transfusion and 2 of the case had to be converted to open laparotomy for dense adhesion and bleeding and second for the appendicular abscess. Most of the patients (73%) were from nearby districts Jhapa, Morang, Sunsari.

## DISCUSSION

The number of laparoscopic surgeries is also rising (123 vs 100) in this institute each year.<sup>3</sup> This shows awareness, demand and availability of service. In this study, mean ages of the patients who underwent diagnostic laparoscopy and operative laparoscopy were 22.3±4.4 and 34.3±10 years respectively; and most of them were in 25-35 years age group which was similar to the study done in Nigeria<sup>4</sup>, Kano<sup>5</sup>, Dhulikhel (36.70±10.60 year)<sup>6</sup>

and Kathmandu (25-34 years)<sup>7</sup>

In our study diagnostic procedures were only 6.5%; subfertility with tubal pathology and endometriosis were two main reasons like in other studies.<sup>8,9</sup>

A total of 115 patients underwent laparoscopic operative intervention and among them the most common ovarian pathology in this study was dermoid cyst (n=42, 34%) followed by endometriosis (n=29, 23%) and cystadenoma (n=25, 20%). This is in contrast to the study done by Shaha R et al<sup>4</sup> where endometriosis was the commonest ovarian pathology followed by dermoid; and other study done by Subedi S et al<sup>3</sup> where endometriosis and cystadenoma were common. This was also in contrast with study by Grammatikakis<sup>10</sup> where endometriosis was 80% of total 1522 and dermoid was only 60 (4%). Study done by Yuen et al<sup>7</sup> showed that endometriosis and dermoid cysts were two most common benign ovarian tumour; ovarian conserving surgery was in 70% whereas in our study it was 58% and salpingo-oophorectomy in 22% which was less than other study.<sup>3</sup> The result of our study was also comparable with Parkar et al<sup>11</sup> where 73.5% had cystectomy, 17.4% had oophorectomy and 6% had aspiration.

Due to lack of morcellator, only small pedunculated myoma were removed. Few of the endometriotic cyst were deroofed and punctured.

There was some degree of complication (16%) like blood transfusion in 18 cases and conversion into open laparotomy in 2 cases similar to the report in Kenya by Parkar;<sup>12</sup> and it was relatively less than other study by Bajracharya<sup>13</sup>, Golash<sup>14</sup> (7%) and Jansen et al<sup>15</sup> (4.5% of diagnostic and 17.9% of operative laparoscopy) but more than Ikechebelu et al<sup>16</sup> where it was only 0.12%. A study done by Sokol et al<sup>17</sup> also found that 6.3% of 2530 cases had converted to open laparotomy especially in cases with risk factor like surgeon inexperience, level of laparoscopic complexity, body mass index greater than 30 kg/m<sup>2</sup>, history of laparotomy, presence of adhesion and intraoperative technical difficulty. In our study period, we did not have any vascular or visceral injury. Due to lack of morcellator, myomectomy for larger myomas were not performed.

## CONCLUSIONS

The common pathologies found in laparoscopy were Dermoid cyst, endometriosis and cystadenoma. There was minimal complication like blood transfusion and few cases converted to open laparotomy.

There was no any visceral injury.

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