ORIGINAL RESEARCH PAPER
Volume - 9 | Issue - 7 | July - 2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

SAFETY OF GYNAECOLOGICAL LAPAROSCOPIC SURGERY IN THE ERA OF COVID 19 PANDEMIC: OUR EXPERIENCE

Obstetrics & Gynaecology

B. B. Dash Senior Consultant, Rejoice Hospital, New Delhi

Sonia Chawla* Consultant, Ghanshyam Dass Marg, Jain Kushal Suri Complex, Police Colony, South Extension II, New Delhi, Delhi 110049Rejoice Hospital, New Delhi *Corresponding Author

ABSTRACT

The novel coronavirus disease 2019 (COVID-19) has become a global pandemic. It has already infected millions of people all over the world with lakhs of death. The pandemic has presented the biggest challenge to health care providers specially the surgeons and OT staff. Routine surgeries are on complete hold but there are many procedures which can't be delayed for long time considering their morbidity and psychological effect on the patients. Minimally invasive techniques such as laparoscopic and robotic surgery have come under controversy because of theoretical risk of aerosolisation. The blanket statement "laparotomy is better during the COVID-19 pandemic than laparoscopy", does not seem to be appropriate considering the dire consequences of converting all laparoscopies to laparotomies. In this article we aim to elaborate our experience of performing laparoscopic surgeries and the precautionary measures to reduce exposure of OT staff.

KEYWORDS

COVID, Laparoscopy, Pandemic

Our Experience:

Measures to minimise the risk of COVID -19 transmission:

We performed a total of 12 laparoscopic surgeries from 15th to 30th April 2020 (Table 1). Detailed informed consent was taken. The safety measures explained below were taken to reduce the exposure. All the patients were discharged on day 2 or day 3 in post operative period and are doing well on follow up.

Table 1: Details of Laparoscopic surgeries done during study period

Procedure	Indication	No. of cases	Average duration of surgery	Complication	Patient discharge on post op day
Laparoscopic Salpingectomy	Ectopic pregnancy	2	15min	Nil	2
Laparoscopic cervical cerclage	Cervical Incompetence	2	35min	Nil	2
Total Laparoscopic hysterectomy	AUB –L, AUB-A	4	35min	Nil	2
Laparoscopic Radical hysterectomy	Cancer endometrium	1	80min	Nil	2
Laparoscopic ovarian cystectomy	Ovarian cyst with suspected ovarian torsion	1	150min	Nil	3
Laparoscopic myomectomy	AUB-L	2	90min	Nil	2

Steps

- Surgery only for urgent indications
- Every patient was evaluated with detailed preoperative history, examination & questionnaire regarding FLU like symptoms and history of travel to high risk areas in last 28 days
- Mandatory pre-operative COVID 19 testing by nasal swab by RT - PCR method.
- Only one attendant was allowed to stay with the patient.
- Everyone visiting the hospital was screened via thermal screening.
- Use of minimum number of staff in OT
- Use of PPE (Personal protective equipment) by all the OT staff
- Operate at minimum intra abdominal pressure (Instead of our usual 15mm pressure we operated at 12mm.)
- Use of sterile disposable camera cover in all the cases.
- Incisions for ports should be as small enough only to allow the passage of ports but no leakage of gas around ports.
- Ultra-filtration (smoke evacuation system) should be used, if available.
- All pneumoperitoneum should be safely evacuated via a filtration system before closure, trocar removal, specimen extraction or conversion to open.
- Due to unavailability of smoke evacuator, we used a different technique. All the surgical plume if required to clear the field or during specimen extraction was evacuated using a suction. The suction pipe was dipped in hypochlorite solution so that gas doesn't escape in surroundings.
- Specimen was kept in endobag before removal whenever possible to prevent gas leakage
- Energy devices were used minimum to decrease the production of aerosols

DISCUSSION

Corona virus has brought difficult times for the whole world. Most of the surgeries are being postponed for the purpose of infection control and patient safety. But still there are patients who need emergency treatment and surgery. Providing best of health care with minimum hospital stay to these group of patient is a new challenge. Being a laparoscopic surgeon, it's still more difficult as various questions have been raised regarding the safety of Laparoscopic procedure considering it be aerosol generating procedure.

Before following the blanket statement of "laparotomy is better during the COVID-19 pandemic than laparoscopy" because of theoretic aerosolization risks, we should consider other aspects of both the procedures[1].

We must also consider the dire consequences of converting all laparoscopies to laparotomies. After laparotomy patient's hospital stay, ICU care, surgical morbidity, chances of wound infection are significantly higher than in laparoscopy. All of these increase the chances of virus exposure to the patients as well as health care workers. Moreover the smoke/ surgical plume evacuation system is more efficient in laparoscopy compared to laparotomy. In laparoscopy we are operating in a closed chamber where the surgical plume evacuation can be controlled using suction or smoke evacuator but in laparotomy the same is not possible. It has been reported that smoke evacuator must ideally be within 2 cm of the source, with 50% loss of capture for every 1 cm from the source of the smoke[2,3]. If COVID-19 particles can be really transmitted via surgical smoke than the risk is more in open procedure than laparoscopy.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is a respiratory virus. The main route of transmission is via droplets. AAGL has also issued a statement in which they suggested that in their experience of previous influenza epidemics and present Covid -19 pandemic, there is no conclusive evidence which proves that respiratory virus can be transmitted via abdominal and peritoneal route to operating room personnel[4].

Various societies and agencies like AAGL and RCOG have also come forward and recommended use of gynaecology laparoscopy in carefully selected patients[4,5].

On the basis of above discussed factors we recommend that laparoscopy is safe for gynaecological procedures in properly selected patient if all the precautionary measures are taken. Patients should not be deprived of the benefits of laparoscopy on the basis of an erroneous theory of increased risk of transmission. However this is a very small study still more research is needed before adopting any policy changes.

REFERENCES

1. Cohen SL, Liu G, Abrao M, Smart N, Heniford T. Perspectives on Surgery in the Time of COVID-19: Safety First. J Minim Invasive Gynecol. 2020;27(4):792-793.
2. Morris SN, Fader AN, Milad MP, Dionisi HJ. Understanding the "Scope" of the Problem: Why Laparoscopy Is Considered Safe during the COVID-19 Pandemic. J Minim Invasive Gynecol. 2020;27(4):789-791.
3. Katoch S, Mysore V. Surgical Smoke in Dermatology: Its Hazards and Management. J Cutan Aesthet Surg. 2019;12(1):1-7.
4. AAGL. COVID-19: joint statement in minimally invasive gynecologic surgery. Available from: https://www.aagl.org/news/covid-19-joint-statement-on-minimally-invasive-gynecologic-surgery/, accessed on May 10, 2020.
5. Joint RCOG / BSGE Statement on gynaecological laparoscopic procedures and COVID-19. Available from: https://mk0britishsociep8d9m.kinstacdn.com/wp-content/uploads/2020/03/Joint-RCOG-BSGE-Statement-on-gynaecological-laparoscopic-procedures-and-COVID-19.pdf, accessed on May 10, 2020.