ORIGINAL RESEARCH ARTICLE

Gynecological Surgeries in COVID-19 Pandemic Era

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Abstract

Introduction: During the coronavirus disease-2019 (COVID-19) pandemic era, different types of emergency gynecological surgeries were performed in the Department of Obstetrics and Gynecology of our tertiary care teaching hospital as per the standard guidelines issued from time to time by the Indian Council of Medical Research (ICMR) and the Federation of Obstetric and Gynecological Societies of India Good Clinical Practice Recommendations (FOGSI GCPR) guidelines for the safety of the patients and healthcare providers.

Materials and methods: A different variety of gynecological surgeries were performed on cases which were admitted in the Obstetrics and Gynecology ward of Sri Guru Ram Das Institute of Health Sciences and Research, Vallah, Amritsar, with effect from the first lockdown, i.e., March 22, 2020, to the end of lockdown, i.e., May 31, 2020 following standard guidelines for the safety of patients and healthcare providers in the COVID pandemic. The details of these cases are being presented in this article.

Results: A very few gynecological surgeries were taken up as they could not have been postponed to the post-COVID times. The use of medical and conservative approach to each possible situation has been tremendous. All cases of abnormal uterine bleeding (AUB), endometriosis, and fibroid uterus were continued to be on medical management. All minor diagnostic procedures were done under short general anesthesia with premedication.

Conclusion: The resumption of regular gynecological work is being regularized in phases. It is a long way before we come back to the original gynecology practice.

Keywords: Anesthesia, COVID-19 pandemic era, Guidelines, Gynecological surgery, Lockdown.

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Introduction

The coronavirus disease-2019 (COVID-19) pandemic caused by the highly contagious virus named severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) has caused mayhem across the world. In this critical situation, the healthcare providers have the responsibilities of not only providing adequate care to the patients but also protecting themselves from falling prey to this potentially deadly disease.[1] The policy of social distancing to prevent the spread of the disease has crippled the ability of the hospitals to deal with a large number of patients.[2] COVID-19 has been an unprecedented experience in the lives of all medical fraternities. In many cases, it leads to a high mortality rate, especially perioperatively and postoperatively. Surgery is a high-risk situation for the transmission of infections.[3] Therefore, any kind of surgical treatment should be scrutinized and postponed if possible. At the same time, however, women continue to require treatment for several gynecological pathologies, some of which cannot be postponed. Nonoperative conservative treatment including pharmacological therapies for hormone-sensitive pathologies should be implemented. As surgery in potential COVID-19 patients represents a high-risk challenge, various international societies recommend a nonsurgical approach when feasible. The European Society for Gynecological Endoscopy (ESGE) and the American Association of Gynecologic Laparoscopists (AAGL) have issued recommendations to continue performing minimally invasive surgery.[4] There is no need to emphasize that infection prevention and control measures are to be taken before any surgical procedure.[5]

Materials and Methods

This retrospective study was conducted at a tertiary care hospital of a medical college, i.e., Sri Guru Ram Das Institute of Medical Sciences and Research, Vallah, Amritsar, Punjab, with effect from March 22, 2020, to May 31, 2020.[6–9] During this time period, Sri Guru Ram Das Institute of Health Sciences catered to a few gynecological cases with full precautions.

Prior to attending to patients in the outpatient department (OPD) clinic, every patient had to undergo a thorough ordeal of screening and triaging. At the entrance of each department, every patient underwent thermal screening following which staff seated behind a long veil of plastic sheet filled triage forms for each patient as per the All India Ophthalmological Society (AIOS). Patients were scored and asked for all relevant history of travel or contact with an affected person or for any symptoms like dry cough, diarrhea, dyspnea, chest pain, and other relevant symptoms. Any patient found to have a score ≥3 or having any symptoms was referred to the COVID-19 OPD being operated by the Medicine and ENT Department in the institute where patients were examined and requisitioned for COVID-19 reverse transcription polymerase chain reaction (RT-PCR) testing as required. Samples from the hospital were being collected by concerned residents after proper protection with personal protective equipment kits and face shields

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and N95 masks. These samples were being sent to the government medical colleges for testing. Patients scored as low risk were further examined in the Gynecology OPD. Patients in general were being guided regarding the COVID-19 precautions of social distancing and mandatory wearing of mask. Seating area in the OPD was reorganized with chairs being aligned at a distance from one another. The OPD examining area was modified as per resources with plastic sheets of approx. 7 m hung as curtains separating the doctor-sitting area and the patient chair. Rooms and examination areas were routinely being sanitized. Examination followed by proper hand-hygiene protocol was used.

There are three units in our Gynecology Department. In order to reduce the exposure to the consultants and residents, each day of the week was serially divided among the three units where each unit came by rotation every third day.

Nursing staff and janitors on each floor were reduced and divided into teams to be rotated at 7-day intervals.

Separate area for examination of emergency patients who are unstable and coming on a stretcher was made with a separate entrance so that admitted patients were not exposed to the newly wheeled emergency patients.

Elective cases and non-emergency complaints were being deferred so as to limit the exposure and help curb the spread of disease. Even though the obstetric OPD still had a rush of routine antenatal visits, however, gyne OPD was drastically reduced. Physical and pelvic (PV) examination was only done in cases where absolutely necessary and more and more patients were being treated based on their imaging reports, such as ultrasound sonography test (USG) or magnetic resonance imaging (MRI).

The various cases which were done during this period were as follows:

- Cervical biopsy—4,
- Cervical dilatation—1,
- Vault biopsy—1,
- Endometrial curettage—3,
- D&C—3,
- Hysterectomy—1,
- Laparotomy—1,
- Bartholin abscess drainage—1,
- Vaginal septum resection—1.

FOGSI came out with first Good Clinical Practice Recommendations on March 28, 2020, which were strictly followed like screening for COVID-19 for every admission, medical management of gynecological problems wherever possible, postponement of elective surgery, and general anesthesia to be used sparingly.[10] Young girls with polycystic ovary syndrome (PCOS) and endometriosis were continued on oral contraceptive pills (OCPs) and medical therapy continued for further three months. Cervical screening was just in a few symptomatic subjects but a cervical biopsy was taken up wherever needed. Management of cases was done as per the latest ICMR guidelines.[11]

However, gyne-oncosurgery and gyne-oncoinfertility surgery, emergency gynecological problems, and anesthesia with sparing use of general anesthesia continued.

Results

The record of the following hospital-managed cases was analyzed and their results are presented in the form of following various case studies.

Cervical Biopsy (4 Cases)

The first cervical biopsy was done for a case of postmenopausal bleeding in a 70-year-old subject, para 2, live 2 with pain abdomen (P2L2) with bleeding per vaginum (PV) with pain in the abdomen with a clinical diagnosis of cervical growth. Patient had brought the MRI report suggestive of cancer (CA) of the cervix. The second cervical biopsy was done for a case of a 48-year-old P2L2 female with bleeding PV on and off with cervical growth with parametrial invasion. The third cervical biopsy was done for a case of a 50-year-old subject P2L1 presenting with lower abdominal pain and postmenopausal bleeding. Her vaginal examination revealed a friable growth replacing the cervix. Her MRI report showed a lesion involving the cervix, lower half of the uterus, and the vaginal fornices with parametrial involvement. There was a focal loss of fat planes in the sigmoid colon and the rectum with infiltration of the posterior wall of the urinary bladder. The fourth cervical biopsy was taken for a case of a 54-year-old P3L3 patient currently having pain in the lower abdomen, postmenopausal bleeding, and discharge per vaginum for the last two to three months. On examination, her cervix was found to be replaced by a growth which bled on touch and her computed tomography (CT) findings showed a cervical growth abutting the urinary bladder and the anterior wall of the rectum with hematometra/pyometra and heterogeneity in the bilateral parametrial regions.

Cervical Dilatation (1 Case)

Cervical dilatation was done in one case for a P3L3 65-year-old female who was a known case of squamous cell carcinoma of the cervix and had received a full course of chemoradiation. She presented with pain in the lower abdomen resulting from a postradiation pyometra following cervical stenosis.

Vault Biopsy (1 Case)

Vault biopsy was done in a 45-year-old P3L2 patient with a history of (h/o) hysterectomy done one year back in a private hospital with a complaint of postcoital bleeding presently. Examination revealed a frank vault growth cervical stump carcinoma.

Endometrial Curettage (3 Cases)

Endometrial curettage was done in three cases. One was done in an 80-year-old P3L3 female with postmenopausal bleeding with distension in the endometrial cavity with fluid in the uterine cavity. Endometrial thickness was 30 mm suspected as endometrial carcinoma.

The second case was a 60-year-old P3L3 female with postmenopausal bleeding with an USG report with uterine growth submucosal fibroid. The USG/MRI–suggested diagnosis was submucosal fibroid. Her panhysterectomy was done. Histopathological examination revealed adenocarcinoma of the uterus with sarcomatous changes in the fibroid. The patient was referred for further treatment in the Oncology Department for chemotherapy.

The third case was a 59-year-old P3L3 female with post-menopausal bleeding with an endometrial thickness (ET) of 22 mm requiring diagnostic curettage.

Dilatation and Curettage (3 Cases)

Dilatation and curettage was done in three cases. The first one was a 43-year-old P2L2 patient with excessive periods with endometrial hyperplasia on USG (abnormal uterine bleeding related to endometrial dysfunction (AUB-E)). The second case was

a nulliparous 24-year-old patient with bleeding PV with a known case of persistent gestational trophoblastic disease under follow-up for repeat D&C. The third case was a P2L2 37-year-old subject with excessive bleeding PV with an increased endometrial thickness of 13.4 mm (AUB-E).

Laparotomy (1 Case)

Laparotomy was done for a 28-year-old patient, with h/o spotting PV on and off and pain in the lower abdomen (ectopic torsion of ovary). The patient had a left-sided adnexal mass of 5–6 cm. Examination and investigations confirmed left-sided chronic ectopic pregnancy.

Bartholin Abscess Drainage (1 Case)

One subject came to us with a Bartholin abscess having acute vulval pain. She was 37 years old P2L2. An incision and drainage was done.

Vaginal Septum Resection (1 Case)

Vaginal septum resection was done in a nulliparous 18-year-old patient with cyclical lower abdominal pain every month and cryptomenorrhea having hematocolpos and hematometra diagnosed on USG and confirmed on MRI.

Out of 16 emergency cases, 10 were directly clinically suspected of malignancy. The malignancy patients arrived with imaging reports done from outside even before biopsy confirmation. They were not delayed for want of confirmatory diagnosis and further treatment. The confirmed malignant cases were referred for their treatment in the Oncology Department which was fully operational at the institute which has an attached oncology wing with specialists.

However, because of the logistical issues and the traffic monitoring due to lockdown, several patients presented with higher stages of carcinoma and avoided seeking medical help resulting in the progression of the disease.

Discussion

Gynecology practice suffered a setback. Adolescent clinic had no registrations. Problems related to obesity in adolescents were a few only. Family welfare entries decreased but people had failed medical abortions and more ectopic pregnancies. Intrauterine contraceptive device (IUCD) insertions were not taken up. Infertility clinic had random walk-in subjects but no investigations or procedures—interventional or endoscopy—were done. Ovulation inductions were deferred as also intrauterine insemination (IUI). Women with complaints of vaginal discharges, lower abdominal pain, and low backache were not seen in the routine OPD.

AUB-PALM COEIN individuals were started on medical therapy after imaging investigations. Elective myomectomy and hysterectomy were deferred. Women with suspected probable cancer were taken up for diagnostic procedures without delay. Actually, a very few patients visited during lockdown making it a predominantly obstetrical affair. A few desperately requiring prolapse surgery also had to be postponed for reducing hospital exposure to a minimum and keeping staff and facilities reserved for COVID emergencies.[12] Menopausal subjects postcancer were followed up, and others were continued on lifestyle modifications on virtual visits.

However, because of the logistical issues and inaccessibility to public transport due to lockdown, several patients presented with higher stages of carcinoma and avoided seeking medical help resulting in the progression of the disease. A single anesthetist was managing the gynecology operating table (OT) as the most were diverted to the COVID-19 duties on rotation and the COVID wards. Each patient was being investigated more thoroughly with a chest X-ray (CXR) by the preanesthetic clinics building onto the financial constraints of the patients to avoid the risk of exposure of the anesthetist and the operating surgeon.

The delay is noteworthy in managing the gynecological procedures and expectantly once normalization of services occurs, it is going to be a real load of work. While all respective gyne specialty guidelines were being issued from time to time for the safety of the patients as well as the healthcare providers, still a few cases required emergency interventions.

Obstetrics noticeably had continued activities as before and surgeries including ectopic pregnancies. A very few gynecological surgeries were taken up as they could not have been postponed to the post-COVID times.[13]

The use of medical and conservative approach to each possible situation has been tremendous. All cases of AUB, endometriosis, and fibroid uterus were continued to be on medical management.

Infertility treatment suffered rights from the postponement of routine preliminary workup to the extent of the assisted reproductive technology (ART) procedures. All *in vitro* fertilization cycles were postponed and ovarian stimulation was cancelled. Even embryos were thawed for use later after the counseling of subjects. Many infertile subjects who conceived while waiting baffled many reproductive specialists.

Many conceptions presented as ruptured ectopic pregnancies in emergency because of being unsupervised and unconfirmed on ultrasound in early stages.

Even contraception use was decreased due to inaccessibility during lockdown. Over-the-counter medical abortion pills without a prior diagnosis of intrauterine pregnancy or extrauterine pregnancy resulted in failures with prolonged bleeding and anemia in women of reproductive age with delayed presentations requiring surgical interventions. The risk of viral transmission at the time of hysteroscopy particularly is theoretically low given that it is not an aerosol-generating procedure.[14]

Depending on the hospital resources, it is possible to submit to surgery symptomatic patients in which pharmacological therapies are not effective, but only when the risk of transmission decreases.[15]

All minor diagnostic procedures were done under short general anesthesia with premedication inj. glycopyrrolate 0.2 mg, inj. butorphanol 1 mg intravenous (IV), and inj. propofol. Its effect lasted for 10–15 minutes.

The procedures were completed in a short time. No laryngeal mask or intubation was required.

Patients having cryptomenorrhea undergoing vaginal septum excision and panhysterectomy for suspected endometrial growth were taken up under spinal anesthesia. General anesthesia with intubation was not adopted in any case.

New methods of virtual consultations, telemedicine, and physical distancing were maintained in the clinics and wards.[16] It is yet to estimate the amount of suffering, stress undergone by patients due to delay, postponement, nonavailability of elective gynecological services, and the burden of gynecological problems in relation to the financial losses.

Conclusion

The load on gynecological specialists is also estimated to be more after normalization of services in the field of endoscopy and

infertility. The resumption of regular gynecological work is being regularized in phases. It is a long way before we come back to original gynecological practice.

Contribution of authors: Different reported cases have been managed by all the different authors.

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