

Comparison of Attendance of Patients Pre-lockdown and during Lockdown in Gynaecology and Antenatal Outpatient Department in a Tertiary Care Hospital of Nadia, West Bengal, India

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ABSTRACT

Introduction: The Coronavirus Disease 2019 (COVID-19) pandemic has brought about a paramount change in the life. This has led to a reduction in the number of routine patients visiting the Outpatient Department (OPD) of various hospitals and this department was no exception.

Aim: To compare the attendance of patient in Antenatal Care (ANC) and Gynaecology Out Patient Department (GOPD) between pre-lockdown and lockdown period due to COVID-19 pandemic.

Materials and Methods: The study was conducted among patients attending the OPD in ANC and Gynaecology for 70 days lockdown from 23rd March to 31st May and 70 days immediate pre-lockdown period from 12th January to 22nd March 2020. Daily attendance was noted and types of patient attending in different sub clinics in Gynaecology OPD compared. Enrolment of new ANC patient and old booked cases was compared during both periods. Descriptive statistics were used and displayed as percentages.

Results: There was a significant reduction in number of patients attending OPD in lockdown period. There was a total of 6088 (87.3%) reduction in number of patients in Gynaecology OPD and 2235 (69.6%) reduction of patients in ANC OPD which was found to be significant with p-value <0.001. Reduction of patient in lockdown days among new ANC was 574 while it was 1661 in case of old patients. The different sub clinics of GOPD like infertility (704), endocrine (1450), uro-gynaecology (656), STD/PID (732), postpartum (597), cancer detection (316), abortion and medical termination of pregnancy (MTP) (330), others (1303) also witnessed a diminution of attendance.

Conclusion: COVID-19 caused a significant decrease in footfall of patients in outpatient department due to lockdown, though the percentage of types of patient attending Gynaecology OPD was almost same.

Keywords: Antenatal care, Coronavirus disease 2019, Out patient department attendance, Pandemic

INTRODUCTION

The mankind faced a tremendous challenge in form of a pandemic in 2020. It all started in the month of December 2019, when a cluster of cases of unknown pneumonia were seen in Wuhan, a city in China [1]. Following that, in early 2020, after many genomic testing, it was found that these cases were caused by a novel virus, which was named as Severe Acute Respiratory Syndrome-Coronavirus 2 (SARS-CoV-2) also known as Coronavirus Disease 2019 (COVID-19) [2].

Before that for a long time coronavirus was known for its respiratory tract involvement. This family of coronavirus moved to human host from the beginning of 2002. Greater understanding of the group of coronavirus will help to find out the mode of transmission and further will help to control the spread of virus [3]. India's first case of COVID-19 was seen on January 30, 2020, in the state of Kerala in South India. A student who came back from China tested positive for COVID-19 and presented with respiratory symptoms. It was then followed by two more cases on consecutive days [4]. The Coronavirus Disease 2019 (COVID-19) was declared a pandemic by World Health Organisation (WHO) and was declared a global health emergency [5].

Governments throughout the world started attempting to contain the rate of infection and mortality of people by using complete or partial lockdown. This drastic measures were taken to reduce the mobility of people and thus to prevent exposure to this highly contagious virus.

The COVID-19 virus is transmitted via droplets and through fomites. The mode of transmission is however not airborne. The microbes present within droplet nuclei less than 5 µm in diameter, can stay in the air for long periods of time and transmitted over a distance of greater than 1 m [6]. Duration of stay of the virus particle in the air and other surfaces are still not clear and are under experimental studies. India has a large population of 1.3 billion [7]. The government of India also declared a total lockdown across the country to control the disease spread. Before that India had a 24 hour lockdown on 22nd March, Sunday. At the time of the announcement, India had 519 confirmed cases and 10 reported deaths due to COVID-19. The total restrictions came into force at midnight local time on 24th March 2020 and were initially enforced for 21 days [8]. Complete lockdown was also followed in West Bengal. The lockdown was extended up to 30th May in four phases. After this period unlock phase 1 started and public transport resumed mostly except local trains [9].

In this global pandemic and lockdown period, routine health care was hugely affected. More emphasis was given to emergency health care and to plan out an effective management to fight this pandemic. Patient admission was restricted to only emergency cases. OPD attendance reduced due to non availability of transport during lockdown and also fears of contacting COVID-19 from hospital environment. The aim of the study was to find out the percentage of types of patient attending Gynaecology and ANC OPD even during the lockdown period in comparison to normal pre-lockdown period.

MATERIALS AND METHODS

This was a retrospective cross-sectional study conducted among the patients attending ANC OPD or Gynaecology OPD in a tertiary care hospital in Nadia district of West Bengal. Permission was sought to access the previous OPD records from Institute (5/6/2020). The data was collected from the records of 12th January to 31st May 2020. The study duration was from the beginning of lockdown for 70 days starting from 23rd March to 31st May during which public transport was not available. This institution has a schedule of six days routine OPD from Monday to Saturday at 9 am to 2 pm. There are separate Antenatal clinics and Gynaecology OPD on all six days. This was compared to the OPD attendance of immediate pre-lockdown period of 70 days starting from 12th January to 22nd March 2020.

Inclusion criteria

All patients attending the antenatal and gynaecology OPD during the study period except those mentioned in exclusion criteria.

Exclusion criteria

1. Patients awaiting surgery and undergoing pre-anaesthetic workup.
2. Patients having history suggestive of suspected COVID-19 affection.
3. Travel history of patient or her family members.
4. History of exposure to COVID-19 patients

A questionnaire was prepared based on flu-related symptoms like fever, cough, fatigue, shortness of breath and other associated symptoms: body aches, sore throat, diarrhoea and runny nose. History of travel was also included in the questionnaire [10]. The answers were noted down as yes or no. Patients having any history suggestive of the above were sent to fever clinic for COVID-19 evaluation.

Authors had further categorised patients in Gynaecology OPD in different sub-categories depending on the complaint of the patients. Those were: a) infertility clinic; b) endocrinology clinic; c) uro-gynaecology clinic; d) Sexually Transmitted Disease (STD), Pelvic Inflammatory Disease (PID) or chronic pelvic pain clinic; e) cancer detection clinic; f) postpartum clinic; g) medical Termination of Pregnancy, abortion and family planning clinic; and h) others.

(a) Infertility clinic: In Infertility clinic workup of infertility, ovulation induction with medication was done. Assisted Reproductive Technology (ART) facility is not available in this institution till date.

(b) Endocrinology clinic: Patients with menstrual problems like menorrhagia, metrorrhagia, menometrorrhagia, oligomenorrhoea, polymenorrhoea, hypomenorrhoea and amenorrhoea were commonly placed under endocrine clinic at their initial visit. After history taking and examination, pregnancy was excluded and patients in reproductive age group with complaint of any of menstrual irregularities were taken into account. The patients were then investigated and managed by medical or surgical means. Commonest endocrinological cases were of polycystic ovarian syndrome, thyroid problems and menstrual irregularities due to hormonal imbalance which were subsequently managed by medications. Puberty or perimenopausal age related menstrual irregularities were also included in this category. If after a battery of investigations, the cause of menstrual irregularities were detected to be tumours, which require operative management were then excluded from endocrine clinic.

(c) Uro-gynaecology clinic: Patient attending uro-gynaecology clinic mostly came with symptoms of urinary tract infection. Those with urinary incontinence and genitourinary descent were placed under uro-gynaecology clinic. Conservative or operative management was done as per requirement.

(d) Pelvic Inflammatory Disease (PID) or chronic pelvic pain clinic: In STD/PID clinics, patients mostly presented with features

of genital tract infection. The commonest complain being that of white discharge and itching in perineum. Chronic nonspecific pelvic pain was also investigated under this category.

(e) Cancer detection clinic: Cancer detection clinic mostly had patient with history or examination suggestive of genital tract neoplasm such as cervical, endometrial, ovarian carcinoma etc. Cervical cancer was most commonly seen. Surgical management considered in patients in operable stages and inoperable ones referred to Radiotherapy department with biopsy report.

(f) Postpartum clinic: Postpartum patients include patient delivered vaginally or by operative methods attending OPD in postpartum period for routine checkups or with any other complications.

(g) Medical termination of pregnancy, abortion and family planning clinic: MTP, abortion and family planning clinics included patient coming for abortion in day care basis or requiring admission. Early trimester bleeding per vagina due to threatened abortion or incomplete abortion were also included in this clinic and managed accordingly. Patients seeking contraceptive advices and ligation operation were also included in this group.

(h) Others: Patient with complaints which were not classified in any of these groups were designated as others category of patients. This group includes breast problems, gastrointestinal tract problems, local injuries to perineum, other nongynaecological problems etc.

Patient awaiting surgery and undergoing pre anaesthetic workup were excluded from the study. Separate antenatal clinics are held six days a week in this institution. Antenatal patient is recorded as new, if it is the first visit to the ANC clinic. Already booked patients are recorded as old patient.

STATISTICAL ANALYSIS

The data was collected after proper designing of the study were represented by basic statistical analysis. Microsoft excel 2007 version 12, programming through Visual Basic for Application (VBA) was used for this purpose. The categorical variables (nominal) in the study were represented by contingency tables and bar graph. Significant differences in percentage of OPD attendance of different clinics were observed. Chi-square test was used to calculate the p-value ($p < 0.001$).

RESULTS

In the study, it was found that in the 70 days of pre-lockdown period total antenatal attendance was 3212. New ANC patients attending for first enrolment were 948 (29.51%) and old ANC attendance was 2264 (70.49%). During the lockdown period of 70 days total antenatal attendance was 977. Among those 374 (38.28%) were new cases of antenatal mother whereas the number of old booked cases who came for check up were 603 (61.71%) as depicted in [Table/Fig-1].

ANC patient	Pre-lockdown (n=3212) (Jan 12, 2020- March 22 nd 2020)	Lockdown (n=977) (March 23 rd 2020- May 31 st 2020)	p-value
ANC new	948 (29.51%)	374 (38.28%)	<0.001
ANC old	2264 (70.49%)	603 (61.71%)	<0.001
Total no. patients	3212	977	0.001

[Table/Fig-1]: Frequency of new and old ANC patients attending Gynaecology Department.

ANC: Antenatal care; $p < 0.001$ considered significant; Chi-square test was used

In the year 2019, total ANC attendance of the institution was 4804 (26.2%) new cases and old booked patient attending were 13490 (73.8%). An average of 400 new antenatal patients enroll every month and an average of 1124 already booked (old) cases come for check up monthly in normal times. There was a total 69.6% reduction in footfall of antenatal mothers during the lockdown period in comparison to pre-lockdown period ($p < 0.001$). During the

lockdown period, old cases attendance were decreased (57.9%) more in percentage when compared to the new cases (43.4%).

In Gynaecology OPD, a total 6977 patient attended during 70 days pre-lockdown period compared to a meagre of 889 patients in 70 days lockdown period as illustrated in [Table/Fig-2]. There was a total of 87.3% decrease in footfall of patients attending the GOPD in lockdown period.

Sub-categories of patients	Pre-lockdown (n=6977) (Jan 12, 2020- March 22 nd 2020)	Lockdown (n=889) (March 23 rd 2020- May 31 st 2020)	p-value
Infertility	766 (10.90%)	62 (6.97%)	<0.001
Endocrine	1707 (24.40%)	257 (28.90%)	<0.001
Uro-gynaecology	815 (11.68%)	159 (17.80%)	<0.001
STD/PID	879 (12.50%)	147 (16.50%)	<0.001
Postpartum	641 (9.18%)	44 (4.90%)	<0.001
Cancer detection	362 (5.10%)	46 (5.10%)	<0.001
Bleeding PV/MTP/ Abortion	453 (6.49%)	123 (13.80%)	<0.001
Others	1354 (19.40%)	51 (5.70%)	<0.001
Total no. patients	6977	889	0.001

[Table/Fig-2]: Frequency of sub-categories of GOPD patients attending Gynaecology Department.

STD: Sexually transmitted disease; PID: Pelvic inflammatory disease; PV: Per vagina; MTP: Medical termination of pregnancy; p<0.001 considered significant; Chi-square test was used

DISCUSSION

The current study revealed that there was a significant difference in the number of patients attending the OPD in comparison to pre-lockdown days. Percentage decrease in attendance was more in GOPD (87.3%) than in ANC OPD (69.6%). The country went into lockdown in four phases. Places were divided into red, orange and green zone according to severity of affection. This institution was in green zone throughout the lockdown period. Patients were scared of acquiring COVID-19 infection from hospital environment. There was also unavailability of any public transport during those days preventing patients to avail hospital services. Telemedicine facility was not available in this institution. However, OPD services and 24 hours emergency services remained unaffected. Patient admission continued as per requirement. Although elective surgeries were withheld for the time being, emergency operations and elective caesarean sections were performed regularly. Percentage of booked old antenatal mothers coming for routine checkups was on a decline than percentage of new first time enrolment. This was done in compliance to guidelines laid down by the Indian Council for medical research (ICMR) wherein the routine care was tailored to minimum number of visits in order to reduce exposure of patients [11]. In a multicentre Italian study, significant reduction in number of admissions due to pelvic pain, vulvovaginitis, genital bleeding in both reproductive and postmenopausal women were observed in comparison to those indications related to first trimester of pregnancy [12].

In comparison to patients attending different clinics, it was seen there was a reduction in percentage of patients in infertility and postpartum clinics. Unavailability of conveyance, fear of contracting infection and nonemergency conditions were major factors keeping them at home. Restructuring of antenatal and postnatal services by reducing contacts, enabled better protection of the patients as well as health care workers [13]. Educating patients about the signs and symptoms of COVID-19, preventive measures and timely access to health care in case of suspected infection should be conveyed during their routine visits. Percentage attending cancer detection clinics remained the same. The management of cancer patients has also undergone major transformation throughout the globe starting from teleconsultation services to adaptation of new diagnostic pathways to postponement of surgeries were observed [14]. Pap

smear, colposcopy and biopsy for diagnosis remained unaffected in this institution. Relative percentage of attendance increased in uro-gynaecology, endocrine and MTP clinics, though there was no significant difference. During the initial 21 days of lockdown, the OPD attendance was minimum which gradually increased during the second half of the lockdown phase indicating the acceptability of the situation and dire need of health care among the people in general. In a study published in Portuguese Journal of Public health, there was a significant drop in number of emergency service use in March 2020 [15]. When considering surgical indications, the decision is individualised by the treating gynaecologist. In the initial phase of pandemic outbreak, it was observed that self regulation resulted in patients themselves cancelling scheduled elective consultations and interventions which were similar to a study in Brazil [16]. Others nonspecific category patients were also decreased. Due to inadequate record, keeping it was not possible to find out the exact number of different types of patients in the above category.

Limitation(s)

Small sample size taken during the initial phase of pandemic.

CONCLUSION(S)

COVID-19 pandemic has changed the way of dealing with patients to a great extent. Protecting the hospital staff and doctors, considering environmental precautions for prevention of droplet and fomite transmission also needs to be changed. Across the world, health care professionals are continuing their duties with a great risk of contracting the disease. In the days to come, there is a need to have proper clinical strategies, active screening of patients along with effective counselling sessions and build an infrastructure to cater large number of patients maintaining proper social distancing and adequate personal protective equipment to prevent transmission of this novel coronavirus. This will serve as assurance for the health care providers and in turn might alleviate the fear and bring back the patients lost in follow-up.

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