

Effects of Covid on reproductive health.

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Abstract

According to WHO, in December 2019, several cases of pneumonia whose cause could not be determined were confirmed in Wuhan, central China. Patients with viral pneumonia caused by unknown microorganisms around December 2019 were reported in Wuhan, China. Since then, the new coronavirus has been confirmed as the causative agent, it was tentatively named the new coronavirus (2019nCoV) in 2019. February 11, 2020 The WHO announced that the coronavirus disease is spreading rapidly in COVID19. As of January 26, 2020, more than 2000 COVID-19 infections have been confirmed, most of which are related to people living or visiting Wuhan, & confirmed infections in humans. Reproductive health is an important public health issue in times of epidemics. The infection with coronavirus (SARS-Cov-2) features a significant impact on reproductive health. COVID infection during pregnancy or in STI/HIV patients who are already immunocompromised can lead to complications & also interruption in regular provisions of services like a regular antenatal check-up, safe abortions, & sexually transmitted infections. COVID 19 preventive interventions, including closures & travel restrictions, can potentially reduce access & use of SRH services for adolescents and girls. Furthermore, there is a potential increase in gender-based violence & domestic abuse. Therefore, the research community urgently needs to establish clinical, epidemiological, & psychosocial behavioral links between COVID19, SSR & the impact of rights. In this study, we look at some of the most important aspects of reproductive health that could be affected by Covid 19 infection. Considering controversial data about the effect of COVID-19 on reproductive health of women in reproductive age, adolescent reproductive health, peri menopausal women, sexual health, fertility, gender based violence, evaluation of clinical manifestations, maternal & perinatal outcomes in pregnant women with COVID-19

Keywords: COVID -19, Pandemic, Reproductive health.

Introduction

Coronavirus disease (COVID-19) is an infectious disease presenting commonly with respiratory symptoms but can present with other systemic features. It was first identified in Wuhan, Hubei, China. On 11th March 2020 WHO declared it as a pandemic. Globally as of 23 July 2021, there have been 192, 284, 207 confirmed cases of COVID-19 [1]. Reproductive health is an important issue public health in times of epidemics. For sexual & reproductive health (SRH) services, alongside respiratory infections it is equally of prime importance to address public health during the epidemic time. With the unavailability of services for women, has proposed major concern about the sexual & reproductive health in them. According to one study around 7 million women of low & middle income countries would not be able to meet their needs of contraception.

Methods

The literature search was performed using the following electronic database: EMBASE, PubMed & Google Scholar,

Web of science, Medline & MedRxiv, was carried out. A manual search of the bibliographic references of retrieved studies was performed to identify other relevant publications. Terms & keywords used to search for documents include: "COVID19", "Pregnancy", "reproductive health" & "adolescents". Efforts have been made to identify all documents related to COVID19 & reproductive health. There is therefore no time limit for research. A selection of titles & abstracts of the studies retrieved was performed to evaluate relevance. The studies included in the review of the current literature related to research include the effect of covidon following: adolescent reproductive health, reproductive age group, pregnancy, fertility, peri-menopausal women.

Effects on adolescent reproductive health

Adolescent age group includes 10-19 years. It is of chief importance to focus on their sexual & reproductive health also. A lot of risks associated with an adolescent age group include unprotected sex, smoking & drinking habits, in addition to

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this poor nutritional status especially in females & sedentary lifestyle is posing major problem in this age group.

In some resource poor countries, there was a huge unmet need for contraception before the COVID-19 pandemic, which worsened during the pandemic. Due to disruption in supply chains & change in focus has resulted in decline in availability of condoms & lubricants. Thus, HIV prevention decreased. Statistics from UNAIDS estimate that 5,500 women between ages of 15 & 24 are infected with HIV every week.

As access to services for post exposure prophylaxis & emergency contraceptives for rape survivors diminishes, there are increased HIV & STI infections & unintended pregnancies.

Decreased supply chain due to decrease in production & delayed movement has enormously increased in costs & reduced the availability of contraceptives eventually leading to teenage pregnancy [2].

Mothers of age group 10-19 years are at major risk due to young age have high chances of developing pre-eclampsia, pre term delivery of the baby & low birth weight & various neonatal complications such as respiratory distress & neonatal sepsis [3].

As a result of the cessation of maternal care, adolescents infected with the COVID19 pandemic may face a greater risk of adverse maternal & neonatal consequences. Prenatal care is reduced or absent, & the functions of the maternity ward & delivery ward are not ideal. The long-term consequences of dyspareunia & delayed intervention include genitourinary fistula seeking high-risk work, & surviving family rejection by engaging in commercial sex work. Young mothers who may be rejected by their children's fathers often have to find jobs for their children. In countries with high unemployment rates, this is often low, informal, & high-risk employment, resulting in higher sexual risks. Many women in poor communities suffer Exploitation & life change.

Unintended pregnancies tend to increase the risk of unsafe abortions, resulting in increased septic abortions, hemorrhage, maternal morbidity & mortality. Because of the lockdown, women initially faced challenges with safe abortion. The reasons were supply cuts for drugs, closures of private hospitals lack of transportation, fear of getting infections, restrictions on movement & transportations & for delayed or unsafe abortions in women seeking abortions in hospitals, also caused complications.

Many abortions that could have been carried out with drugs were delayed due to lack of access for which advanced pregnancy surgery can cause morbidity & mortality. On highlighting upon psychosocial aspects, increase incidences of depression, suicidal tendencies, fear, panic attack, distrust, sexual & gender based violence, panic attacks, many eating & sleep disorders have been reported in such cases [4]. Immediately after a potential traumatic SRH incident the lack of psychosocial counseling has long term consequences for adolescent girls. Covid in itself has posed major uncovering of STDS & HIV incidences & unwanted pregnancies in adolescent age groups. The COVID19 pandemic itself

appears has posed many risks associated sexual health, such as sexually transmitted infections including HIV & human papillomavirus & unwanted pregnancies in young people especially girls.

The COVID pandemic has developed economic & logistical barriers to access to reproductive services, including contraception, safe abortion services, & regular fertility testing. Diagnosis & management of high-risk pregnancies & rare diseases has been swept into a major setback during the epidemic due to a shortage of medical staff to reduce patient follow-up & prenatal screening & treat fetal patients. A rare disease causing recurrent maternal & perinatal morbidity & mortality with abortion [5]. Reduced availability of self-quarantine services between patients & healthcare providers. Pregnant women are at an increased risk of severe COVID-19 when infected compared to women of the same age who do not appear to be at increased risk of SARS-COV2 infection [6]. High fever in early pregnancy is associated with congenital malformations such as nerve canal defects & increases the likelihood of preterm birth, but clinical aspects such as fever, cough, vomiting, and pain are similar to those of non-pregnant women of the same age. Throat, chest pain, headache & dyspnea. In terms of maternal outcomes, 14.3% of women gave delivery before 37 weeks of pregnancy, 5.9% had preeclampsia, 14.5% had miscarriage, 9.2% had preterm premature rupture of membranes, & 2.8% had foetal growth restriction [5]. Lockdown has undermined family planning & contraceptive demand, severely impacting the supply of modern contraceptives. Unwanted pregnancy can lead to maternal complications that can have serious health consequences, including unsafe abortions, infant & maternal deaths, & morbidity that can be prevented through the use of contraceptives [7]. Due to the lockdown, social marketing organizations & private providers lost distribution, reducing access to abortion & family planning services [8]. Frustrated ligation & IUD insertion were reduced due to the risk of isolation & infection. Many abortions that can be practiced drugs are delayed because they are inaccessible [9]. Therefore, surgical treatment of pregnancy can lead to morbidity & mortality. When psychological effects develop into chronic disorders or trauma, it adversely affects the menstrual cycle, reproductive health & oocyte quality. Many markers of stress & anxiety (adrenaline, norepinephrine, natural killer cell-level cardiovascular responses to stress-induced stress, etc.) have been shown to be associated with related terms [10]. Therefore, it can be concluded that stress & anxiety are having a negative effect.

Effects on peri-menopausal women

Severe menstrual bleeding is a topic of discussion, & it has a substantial influence on women's quality of life. A fundamental grasp of the menstrual cycle & an understanding of endometrial risk factors derived from a clinical history are at the heart of delivering medical care for women with Abnormal Uterine Bleeding (AUB). A hormone imbalance is the cause of AUB in many women. It can also be caused by the following factors: Uterine wall or lining thickening, uterine fibroids, uterine polyps, ovaries, uterus, cervix, or

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vaginal cancers. Anemia, infertility, & endometrial cancer are all possible side effects of persistent irregular uterine bleeding. If therapy & supportive treatment are not started right away, acute abnormal uterine bleeding can lead to severe anemia, hypotension, shock, & death. The Royal College of Obstetricians & Gynecologists (RCOG), the Royal College of Obstetrics & Endoscopy (BSGE), & the Royal College of Obstetrics & Cancer (BGCS) issued unified guidelines for AUB care in the COVID 19 outbreak in mid-2020 [11]. The Basic Care Women's Health Forum has amended its guidelines for use in primary care to reconsider how you will manage your bleeding problems in women.

Cancer patients have a higher chance of death due to the coronavirus, but there does not appear to be an increased risk of disease, & there is no evidence that the incidence has grown in this population. The immunosuppressive nature of malignant tumours, as well as present or recent chemotherapeutic drug use, enhances the chance of death [12]. Concerns about patients infected with COVID19 during the perioperative period may have caused delays in surgery, as well as a reduction in staffing, operating room availability, & risk to existing staff & patients [13]. These considerations must be weighed against the possibility that the cancer will spread quickly.

Delays in treatment can result in major complications & disease progression, impairing surgical recovery and, as a result, the prognosis of the patient.

Effects on fertility

COVID 19 has the potential to harm a man's reproductive health & lead to infertility. The lung is the primary target organ; however other organs may get impacted as well. Angiotensin-Converting Enzyme 2 (ACE2), the primary component of the renin-angiotensin-aldosterone pathway, is SARSCoV2's principal host receptor (RAAS). ACE2 is also implicated in the regulation of testosterone & sperm production in males. ARSCoV2 can infect the testicles & have a harmful impact on the male reproductive system thanks to ACE2 [14].

ARSCoV2 can infect the ovary's follicular membrane & granule cells, reducing egg quality & resulting in female infertility [15]. ARSCoV2 can attack the follicular membrane & granule cells of the ovary, reduce oocyte quality, and cause female infertility [15]. Although it is not clear whether SARSCoV2 can be detected in the female reproductive system, there is no doubt that chronic inflammation caused by SARSCoV2 can cause female infertility, high direct risk of the ovarian & hypothalamic pituitary ovarian axis, affecting the female reproductive structure & function [16].

Gender based violence

With the effect of lockdown, the domestic violence policy reveals that women are under major threat, especially domestic violence against them, not just in families but also in work life, financial stability & emotional & psychological stresses. Intimate partner violence is an important problem affecting women's health & Obstetricians should routinely screen for the victims & provide supportive intervention. Poverty & associated stress are the key attributes of it. Although violence

occur in all age groups but it is more frequent & severe in lower groups. IPV in itself is significant & yet a preventable public health problem affecting millions of women specially in pandemic times regardless of age, religion, ethnicity, or sexual orientation. IPV includes physical violence, sexual violence, stalking & psychological aggression by current or former partner. IPV also includes injury, depression, PTSD, GIT & gynecological problems. As the governments around the world implement lockdown measures to combat COVID19, advocates in Domestic & Family Violence (DFV) business have noted that these policies have the potential to increase domestic violence against women, particularly domestic violence against women (IPV). Controlling physical, emotional, psychological, financial, surveillance, & isolation tactics are all examples of IPV [17].

The increase in IPV seen during the pandemic is attributable to the fact that women with limited mobility are less likely to flee a partner, as well as other variables such as stress, financial difficulties, lack of access to contraception, which leads to sexually transmitted illnesses & unwanted births [18].

During the present epidemic, international organizations have noticed an increase in reports of IPV, raising awareness of the possible causes of this increase. It's vital to remember that existing practices of social distancing, self-isolation, & imprisonment can trigger episodes of IPV when considering the risk factors connected with IPV & the perpetrator's basic urge to control victims [19].

Effects on sexual health

COVID -19 pandemic has affected sexual health in different ways. There is no current evidence that it is transmitted sexually but certain sexual behaviours can transmit it (kissing, saliva exchange, physical touching) Individuals already experiencing sexual dysfunction may also experience changes & distress, Stress, self-isolation, social distancing & anxiety may cause decrease in sexual desire. Overall this covid pandemic has probable impact on libido, sexual health dysfunction, orgasmic & ejaculatory disorders [20-21].

It is important to note that there is evidence that there may be other related effects during a pandemic. For example, the use of online pornography is growing rapidly around the world, & we can see the recently recorded increase in views due to stress, anxiety, insecurity, or overcoming the fear of death. Many stressful relationships, especially if a couple or partner argues that they have had compulsive sex because of pornography use. In addition, people who experience compulsive sexual behaviour may be more vulnerable at home because of their limited access to coping skills & increased stress & anxiety at home. People who already have sexual dysfunction may experience changes in symptoms, pain, & treatment of sexual problems. For some people, the increase in stress & anxiety caused by the global pandemic may be a mitigating factor for sexual problems. This section analyzes the potential impact of the current COVID19 pandemic on certain sexual dysfunctions: mismatched sexual desire & desire, Erectile Dysfunction (ED), orgasm & ejaculation disorders, & impaired penetration.

Genito-Pelvic Pain Penetration Disorders: GPPPD has proven to be very common: It is a common cause of sexual pain disorders prevalence studies of vulvar pain have shown that the life expectancy of women of reproductive age ranges from 10% to 28%. In the sexual clinical setting, the prevalence of vaginitis ranges from 5% to 17% years of age. Women with GPPPD reported that anxiety & depression were also associated with pain intensity & sexual dysfunction. Therefore, very stressful situations such as home confinement can worsen sexual function. A recent study seems to report an increase in symptoms of loneliness & depression in women who experience severe frequent pain from intercourse. The social isolation measures needed to control the pandemic can intensify such loneliness & reduce the suffering of people with GPPPD.

Both men & women can exacerbate mental stress, including depressed mood, anxiety, depression, irritability & fear, leading to a significant quarantine, which usually complicates sexual dysfunction. Orgasm disorders, especially orgasmic disorders, can complicate Premature Ejaculation (PE) or coldness. Reduced motivation to seek a cure for sexual problems can exacerbate potential relationship problems & conflicts. Considering the given scenario, please note that there are a rising number of people who are promoting their sexual satisfaction by using web cameras for masturbation & virtual sex as a safe way to satisfy their libidos in the age of lockdown self-isolation social distancing [22-25].

Recommendations

- Whenever possible, we should provide online consultation & follow-up to avoid unnecessary visits.
- Create online platform to counsel & guide women for contraceptive methods.
- For face to face consultations, implement strategies to reduce the contact, such as open spaces outside the facility.
- Use of personal protective kit for both women & health care worker.
- Pregnancy with COVID-19 must be considered as an increased risk case & proper fetal monitoring should be done.
- Emergence with social services would help in providing emergency care & admission of victims of domestic abuse.
- Counselling can be done to reduce anxiety through online services.
- Attention should be made on assessment of fertility in young couples after this pandemic, especially those who got infected with COVID-19.

Key Messages

- Safe contraceptives method should be provided to couples.
- Couples with COVID 19 should provide reliable information & consultation to avoid fear & excessive stress. Strict adherence to hygiene & personal care.

- Hygiene & disinfection to be strengthened.
- Maintenance of social distancing & proper use of mask.
- Rapid & Effective communication is essential.
- Regular ante natal check-up & safe abortion services should be provided in safe accessible environment.

Conclusion

Therefore, it is essential to improve healthcare structure in synchronization with covid 19 pandemic. It is also necessary to develop policies for implementation of the laws for sexual right violation. Sexual & reproductive health care services are essential & are usually neglected in pandemic & epidemics. Abortions, antenatal care, new born care, family planning, contraceptives should be considered essential.

With regard to sexual transmission, there is no sufficient evidence of sexual transmission of virus in asymptomatic individuals so there is no need to recommend abstains from having sexual intercourse.

Conflict of Interest

All authors do not have any possible conflicts of interest.

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