Common Gynaecological Problems and Sexually Transmitted Infections

Ankita Raikwar[1]

1 Jaipur National University

Funding: No specific funding was received for this work.

Potential competing interests: No potential competing interests to declare.

Abstract

The genital tract is the portal of entry for numerous sexually transmitted diseases (STD). A number of vaginal infection present with few or no symptoms and yet produce serious effect and can be transmissible to other people. An abnormal vaginal discharge is a common complaint in women, and it can be due to vaginal infections such as bacterial vaginosis, candidiasis, and trichomoniasis. These vaginal infections increase susceptibility to STD, including HIV. It is associated with complications such as infertility, ectopic pregnancy, low birth weight and prematurity. The normal vaginal ecosystem depends on the balance of hormones and bacterial. It is characterized by increased vaginal pH and replacement of lactobacilli. It can cause vaginal irritation, pruritus, and malodorous discharge though asymptomatic carriage is common. Addressed to the clinicians and auxiliary health workers who diagnose and treat patients, this article concentrates on the many things that can be done, even under highly imperfect conditions, to help realize the twin goals of reducing transmission and preventing morbidity, it pays special attention to conditions in developing countries, where use of existing primary health care services promises to be the most realistic way to attract and treat more patients. Throughout, improved diagnosis and treatment are regarded as the cornerstone for better control, though readers are reminded that transmission will be reduced only when patient management is supported by counselling, health education, and partner notification. There are four basic strategies for the control of sexually transmitted diseases and then discussion of these in terms of the clinical and support services needed to reach more patients with higher-quality care. A core review of universal population-based data on sexually transmitted infections (STI), bacterial vaginosis (BV), and candidiasis reflecting epidemiological situation is the basic aim of this article. Sexually transmitted diseases (STD) being a major health problem affecting mostly young people in both developing and developed countries. Article includes review of socio-demographic characteristics and genital symptoms, and thereafter examined gynaecologically. According to review study most common gynaecological complaint was lower abdominal pain. STI are common in women and represent an important health threat in view of the HIV pandemic. The most common sexually transmitted infections found included trichomonas vaginalis (1.7%) and syphilis (3.7%). Statistical determination from various resources was reviewed and a conclusion was determined based on data. Sexual disease is quiet a concern among women. It is associated with adverse medical and social problems. Above infections are common in the age group 25-35. There is urgent need to sensitize the community about reporting early and immediate medical treatment. It may play a critical and under-recognized role in amplifying HIV transmission and, in

some circumstances, may have a major impact on the epidemic dynamics of HIV infection and AIDS in the world.

Ms. Ankita Raikwar, PhD Scholar and **Dr. Birendra Srivastava, Director**

School of Pharmaceutical Sciences, Jaipur National university, Jaipur, Rajasthan, India

Keywords: STD- Sexually transmitted diseases, HIV- human immunodeficiency virus, STI- Sexually transmitted Infection.

Introduction

This systematic review, which focused on 15 publications, included women aged ranging from 13-25 years with a history of gynaecological problems, sexually transmitted infections sexual violence and compared them with controls who had not suffered it to analyze gynecological morbidity outcomes.The public health epidemic of sexual victimisation is quiet a great concern. Since bacteria are the primary cause of UTIs, and could be arised by pregnancy, routine sexual activity, diabetes, etc. The symptoms include the desire to frequent urination, stomachaches, and a burning sensation while urinating [1].

According to study 2022, 26% of women had experienced child sexual abuse (CSA), which is defined as any "sexual activity with a child who is not able to consent" (International Society for Traumatic Stress Studies [ISTSS], 2022, and their lifetime, defined as oral, vaginal, or anal sex obtained by force, threat of violence, or when the individual was unable to consent. Also according to study women at college constitute an enhanced risk group for a variety of sexual assaults, with between 3% and 10% of college-aged women reporting having been raped in a given academic year. Anxiety, despair, post-traumatic stress disorder, and suicidal thoughts are a few of the most well-researched mental health effects. In addition, patients are also reported with physical health issues, such as musculoskeletal pain, gastrointestinal issues, headaches, exhaustion, and dizziness, and they seek medical attention more frequently[2].

Initially, gynaecological health concerns may be a sign of longer-term physiological problems brought on by suffering bodily harm as a result of sexual assault. Additionally, survivors of sexual assault are more likely than non-victims to engage in a variety of sexual risk behaviours that may raise their risk of developing gynaecological health issues like untreated and chronic STDs, recurrent vaginal infections, and pelvic inflammatory disease. With regard to pain symptoms specifically, increased sympathetic arousal associated with the impacts of traumatic experiences may lead to alterations in the inflammatory immune process and increased pain sensitivity as a result. Finally, as noted, sexual victimization survivors have an increased risk for depression and anxiety symptomology, both of which are associated with an amplification of
both illness-specific (for those with chronic health issues) and nonspecific (those not associated with a specific illness or pathology) somatic symptoms[3].

It's important to obtain regular checkups and to be aware of one's health in order to prevent these numerous gynaecological disorders. One need to go periodic examination of gynaecological including, breast examinations, colposcopies, pelvic ultrasounds to find abnormalities, and other inspections. Abnormal uterine bleeding (AUB) and irregular menstrual cycles are two of the most prevalent gynecologic issues among teenagers. Heavy bleeding or menstruation that does not occur on a normal cycle is referred to as "AUB." Among the many chronic gynaecological conditions include struma ovarii, dysmenorrhea, imperforate hymens, chronic pelvic pain, menorrhagia, and a number of other illnesses. Struma ovarii, which is characterised by an ovarian tumour with thyroid tissue as its major cell type, is one of these problems. The lack of or incomplete development of secondary sexual characteristics during the age range when 95% of children of that sex and culture have started the process of sexual maturity is referred to clinically as delayed puberty. But among teenage mothers, the high prevalence of poverty, low educational attainment, and single-marriage status frequently masks the link between early maternal age and chronic illness. [4][5].

According to study WHO 2022 report, research of gynaecological and sexual illnesses in rural women depicted, 55% had gynaecological issues, whereas 45% had no symptoms. Gynaecological or sexual diseases were discovered to be present in 92% of all women, with 3.6 on average per person. One-half of this morbidity was caused by genital tract infections. Only 8% of the women had previously undergone a gynaecological exam and therapy. Gynaecological disorders and the use of female contraceptive methods were associated, but this could only account for a tiny portion of the morbidity[5].

Genital tract microecological diseases can result from genital tract infections, such as vaginitis and cervicitis. Trichomonasis (TV), vulvovaginal candidiasis (VVC), desquamative inflammatory vaginitis (DIV), bacterial vaginosis (BV), aerobic vaginosis (AV), desquamative inflammatory vaginitis (DIV), and cervicitis are common kinds of vaginitis that are linked to STIs. STIs, which are thought to affect 1 million people everyday worldwide, are a serious medical issue that negatively impacts the health of women. Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG), herpes simplex type 2 (HSV-2), Mycoplasma hominis (MH), Mycoplasma genitalium (MG), Ureaplasma urealyticum (UU), and Ureaplasma parvum (UP) are among the common causes of STIs. According to the World Health Organisation, 357.4 million new infections worldwide in 2022 will be caused by CT infection, NG infection, syphilis, and TV combined [6].

Patients were choosed based on criteria premenopausal individuals, those with a history of sexual activity, those who were not in the menses phase of their cycles, and those who had abstained from sex for three days before to sample collection were considered when selecting patients [5][7].

Maternal oestrogens in the neonatal girl, is responsible for multilayered vaginal epithelium which becomes thick, with numerous glycogen cells, but with low hormone levels in the prepubertal years, the epithelium becomes thin and atrophic, losing the glycogen. This also predisposes to infection [8].

Vulvar conditions causing vulvar and vaginal irritation and discharge are common in prepubertal girls and are seen frequently in general practitioners' surgeries and out-patient clinics.

The most common gynecological problems include-

i. Vulvovaginitis

Indication of vaginal discharge and vulvar soreness or irritation, due to the effects of maternal oestrogens. While the discharge is clear, white and odourless and settles within a couple of weeks following delivery when the oestrogen levels drop. Dropping oestrogen levels may also cause the discharge to be blood stained as the endometrium, also stimulated by oestrogen, breaks down.

In contrast, the discharge of vulvovaginitis is offensive and is yellow, green or brown in colour and caused by bacterial infection. In its less common presentation, vulvovaginitis

is associated with other infections such as a sore throat and settles as the initial illness clears. A prior personal or family history of sore throat in over half of the girls presenting with discharge also reported severe vulvovaginitis has also been reported in association with systemic infections such as varicella, measles and rubella [2].

ii. Vaginal Bleeding

Vaginal bleeding in a prepubertal girl is uncommon but must always be assumed to be pathological and should be thoroughly investigated. It is, however, unusual to identify a specific cause, in most cases the presumption being that it is related to recurrent vulvovaginitis. Other causes include vaginal or cervical tumour, a variant of precocious puberty or a foreign body. Vaginal or cervical tumours such as embryonal rhabdomyosarcoma, clear cell carcinoma of the vagina or mesonephric carcinoma are extremely rare. They may present with intermittent vaginal bleeding, sometimes associated with the passage of tissue. Variations of precocious puberty, such as isolated menarche, may occur. These girls present with intermittent, often regularly, vaginal bleeding varying in amount from a few hours spotting to several days bleeding requiring sanitary protection. There are no other signs of puberty [2].

iii. Vulvar irritation

Vulvar irritation without discharge is also common. In one study, 33% of girls attending a dermatology clinic had irritation due to either atopic or irritant dermatitis. Irritant dermatitis may be due to poor hygiene, but may also be due to chemicals found in such items as soap powder, perfumed soaps, fabric conditioner or bubble bath. While patch testing may be helpful, detective work may be required to identify the responsible chemical[2].

iv. Labial adhesions

Labial adhesions or labial fusion is quiet a very common symptom in the 2-4-year-old age group, and although much less common, it may persist until later childhood years. An incidence of 1.8-3.3% has been reported, although this is almost certainly an under reporting as many girls with labial adhesions are asymptomatic. One study in which girls were examined with a colposcope reported an incidence of 38.9%, but some labial fusions were only 2 mm in length. Adhesions are thought to be secondary to vulvovaginitis or other vulvar irritation in which the skin becomes so excoriated and denuded that during the healing process the labial edges fuse together, the adhesions usually developing posteriorly and moving forwards. Most girls are asymptomatic and the girl presents only when the mother notices the appearances when changing her nappy. Symptoms, if present, are usually vulvar irritation or soreness. The girl may also present with ‘wetting’ as dribbling of urine may occur as a result of urine being trapped in the vagina behind the line of fusion when the girl micturates and flowing out when the direction of the vagina changes as the girl stands up. In a child with labial adhesions, the fused labia have the appearance of a flat perineum, with a fine line seen along the line of fusion, the fused labia preventing visualisation of the hymen, clitoris or urethral meatus. In a child with

congenital absence of the vagina, the labia, clitoris and urethral meatus are easily identified and separation of the labia allows easy visualisation of the hymenal orifice but an inability to see further into the vagina. Management includes explaining to the parents how the fusion has arisen and reassurance that it is a self-limiting condition and that the internal anatomy will be normal. No further treatment is necessary in a girl who is asymptomatic[2].

v. Threadworms

Threadworms (Enterobius vermicularis) are well recognised as a common cause of anal irritation, but it is less well recognised they can also cause vulvar symptoms. The classic presenting symptoms are peri-anal and vulvar irritation. Adult worms emerge from the anus at night and lay their eggs around the anus and vagina, causing the symptoms of irritation to be worse at night.

Diagnosis and subsequent treatment is usually based on symptoms alone, but if it is wished to confirm the diagnosis, the sticky tape test is the investigation of choice. Sticky tape is applied over the anus at night, removed in the morning and transferred to a glass slide. Adult worms and ova can be seen on microscopic examination[2].

vi. Dermatological conditions

Any dermatological condition can affect the vulvar area but the commonest in childhood and adolescence are eczema and lichen sclerosus. As the appearances of eczema can vary and may not be present at the time of examination in the clinic, it is important to enquire in a girl presenting with vulvar irritation about the presence of skin conditions such a eczema elsewhere on the body, which may provide a clue about the diagnosis.

Napkin rash is common but rarely presents to the gynaecologist, being more usually dealt with in primary care settings. Napkin rash is caused by irritation of the skin by ammonia from urine. Secondary infection with bacteria or candida is common. The condition is managed by general hygiene advice and barrier creams[2].

vii. Lichen sclerosus

Lichen sclerosus is a chronic skin condition, thought to be auto-immune in origin. It can affect any area of the body but is commonly seen in the ano-genital area. It can affect women of all ages but is most common at the extremes of life – in prepubertal girls and in postmenopausal women. The girl presents with intractable vulvar irritation, the condition being found in 18% of prepubertal girls presenting in this way. The diagnosis is frequently delayed as clinicians, assuming the irritation is due to vulvovaginitis or candida, fail to examine the perineum.

Examination of the vulva shows the characteristic appearance of irregular, shiny pearly white macules or papules which can coalesce into larger plaques. There are often associated areas of erosion, ulceration and purpura and, in severe cases, haemorrhagic bullae. The appearances in severe cases can lead to a mistaken diagnosis of sexual abuse. Biopsy is not usually required as the clinical appearances are diagnostic. However, if a biopsy is performed, histological examination shows hypoplasia of the epidermis with flattening of the rete pegs, hyperkeratosis on the surface of the epidermis with oedema and lymphocytic infiltration in the deeper dermis[2].

viii. Bacterial vaginosis (BV)

Bacterial vaginosis (BV) results from an imbalance in beneficial and harmful bacteria in the vagina. It can cause vaginal itchiness, unusual discharge, and a characteristic odor, among other symptoms.The body may be able to clear bacterial vaginosis (BV) on its own. Without treatment, however, it increases the risk of other health issues. Seeking

medical advice can help a person avoid discomfort and prevent complications.

BV is the vaginal condition among females of childbearing age. Many females with BV have no symptoms. If symptoms occur, they typically involve: changes to vaginal discharge, a burning, itching, and irritation in the vaginal area, a burning sensation when urinating. The person's vaginal discharge may have: a watery, thin consistency, a gray or white color, a strong, unpleasant smell, often described as fishy. There may also be a burning sensation during urination and itching around the outside of the vagina. However, this is less common. Causes include- BV resulting from an imbalance in the populations of beneficial and harmful bacteria that naturally live in the vagina. An imbalance can occur for many reasons, including: having sex with a new partner, having sex with multiple partners, douching, not using a barrier method, such as a condom, during sex, being pregnant, recently using antibiotics. BV often develops after sex with a new partner. BV is not an STI, but it can increase the risk of developing an STI.

The role of bacteria- All parts of the body havebacteria, and only some are harmful. Most bacteria in the vagina are helpful, and BV occurs when the harmful bacteria grow in number. The vagina should contain bacteria called *Lactobacilli*. They produce lactic acid, making the vagina slightly acidic. This prevents some harmful bacteria from growing there. Having lower levels of *Lactobacilli* can cause the vagina to become less acidic. If the vagina is not acidic enough, harmful bacteria can grow and thrive[8].

ix. Aerobic vaginitis (AV)

Aerobic vaginitis (AV) is an alteration in vaginal bacterial flora that differs from bacterial vaginosis (BV). AV is characterised by an abnormal vaginal microflora accompanied by an increased localised inflammatory reaction and immune response, as opposed to the suppressed immune response that is characteristic of BV. Given the increased local production of interleukin (IL)-1, IL-6 and IL-8 associated with AV during pregnancy, not surprisingly AV is associated with an increased risk of preterm delivery, chorioamnionitis and funisitis of the fetus. There is no consensus on the optimal treatment for AV in pregnant or non-pregnant women, but a broader spectrum drug such as clindamycin is preferred above metronidazole to prevent infection-related preterm birth. The exact role of AV in pregnancy, the potential benefit of screening, and the use of newer local antibiotics, disinfectants, probiotics and immune modulators need further study [9].

x. Desquamative inflammatory vaginitis (DIV)

Desquamative inflammatory vaginitis (DIV) is an uncommon form of chronic purulentvaginitis. It occurs mainly in Caucasians with a peak occurrence in the perimenopause. Symptoms and signs are nonspecific; DIV is adiagnosis of exclusion, and other causes of purulent vaginitis should be excluded. The main symptoms include purulent discharge, vestibulo-vaginal irritation, and dyspareunia. Examination of vaginal walls shows signs of inflammation with increased erythema and petechiae. Through microscopy (wet mount) of thevaginal secretions, DIV is defined by an increase in inflammatory cells and parabasal epithelial cells (immature squamous cells). Vaginal flora is abnormal and pH is always elevated above 4.5. Although etiology and pathogenesis remain unknown, the favorable response to anti-inflammatory agents suggests that the etiology is immune mediated. Either local vaginal clindamycin or vaginal corticosteroids are adequate treatment. As a chronic condition, maintenance treatment should be considered as relapse is common. Vaginal symptoms suggestive of vaginitis such as vaginal itching, discharge, and dyspareunia are common reasons for women to visit gynecological clinics[10].

xi. Trichomoniasis (TV)

Trichomoniasis is perhaps the most common curable sexually transmitted disease worldwide, yet few resources are devoted to its control. It is associated with potentially serious complications such as preterm birth and human immunodeficiency virus acquisition and transmission. The immunology of a related organism, Tritrichomonas foetus, which causes disease in cattle, has been investigated to some extent, but more work is needed for the human strain, Trichomonas vaginalis. In addition, although trichomoniasis is easily treated with oral metronidazole, there is concern that the number of strains resistant to this antibiotic are increasing, and currently no alternative is licensed in the United States. As more is appreciated concerning the important public health implications of this common infection, more work will need to be done in understanding the diagnosis, treatment, and immunology of this organism.

Trichomonas vaginalis is the causative agent of trichomoniasis, a common cause of vaginitis. Despite being a readily diagnosed and treatable sexually transmitted disease (STD), trichomoniasis is not a reportable infection, and control of the infection has received relatively little emphasis from public health STD control programs. More recently, however, appreciation of the high rates of disease and of associations of trichomoniasis in women with adverse outcomes of pregnancy and increased risk for human immunodeficiency virus HIV infection suggest a need for increased control efforts. This review discusses the epidemiology, clinical manifestations, diagnosis, treatment, complications, and pathophysiology of this parasitic infection [11].

xii. Vulvovaginal candidiasis (VVC)

Vulvovaginal candidiasis (VVC) affects as many as one of every two women during their life but is perceived as a common or nuisance condition because it is easily treated, often with medicines available over the counter. However, on a population scale VVC's impact is large, costing an estimated $2.84 billion in the United States alone (adjusted to 2017 dollars from. Most women will experience only one or two episodes of VVC, but there is a large, albeit poorly defined, subset that experiences multiple recurrences. Recurrent vulvovaginal candidiasis (RVVC) adversely affects quality of life, mental health, and sexual activity. Diagnosis is not straightforward, as it is defined by the combination of often nonspecific vaginal symptoms and the presence of yeast—which is a common vaginal commensal. In clinical practice, VVC and RVVC are usually treated based solely on signs and symptoms.

VVC, more generally referred to as a vaginal yeast infection, is characterized by vulvar erythema, excoriation, pruritus, and an abnormal “cheese-like” or watery vaginal discharge. VVC also may be accompanied by a change in vaginal odor. Symptoms found among patients with vaginal cultures positive for *Candida* range from none to many. *Candida albicans* most commonly causes VVC, accounting for 85%–90% of all cases, with the remainder attributed to*C. glabrata*, *C. krusei*, *C. famata*, and *C. tropicalis*. VVC is rare before menarche, peaks during the reproductive years, then declines after menopause. Risk factors for sporadic VVC include sexual activity, contraceptive use, antibiotic use, carbohydrate intake, and diabetes.

RVVC has been defined as 3 or more, and as 4 or more, episodes of VVC within a 12-month period. Behavioral risk factors associated with VVC have not been associated with RVVC, but there is some evidence of an association between polymorphisms in genes coding for innate immunity and RVVC. The most complete evidence is for a polymorphism in mannose-binding lectin (MBL2), which binds fungi as part of host innate immune response.

Recurrent vulvovaginal candidiasis (RVVC), multiple episodes of vulvovaginal candidiasis (VVC; vaginal yeast

infection) within a 12-month period, adversely affects quality of life, mental health, and sexual activity[12].

xiii. Cervicitis

Cervicitis is swelling or inflamed tissue of the end of the uterus. Cervicitis is the inflammation of the cervix. It is usually caused by an infection but may also be caused by chemical exposure or the presence of a foreign body. Cervicitis is most often caused by an infection that is caught during sexual activity. Sexually transmitted infections (STIs) that can cause cervicitis include: Chlamydia, Gonorrhea, Herpes virus (genital herpes), Human papilloma virus (genital warts), Trichomoniasis. Other things that can cause cervicitis include: A device inserted into the pelvic area such as a cervical cap, diaphragm, IUD, or pessary, Allergy to spermicides used for birth control, Allergy to latex in condoms, Exposure to a chemical, Reaction to douches or vaginal deodorants. Cervicitis is very common. It affects more than one half of all women at some point during their adult life. Causes include: High-risk sexual behavior. History of STIs- Many sexual partners, Sex (intercourse) at an early age, Sexual partners who have engaged in high-risk sexual behavior or have had an STI, Too much growth of some bacteria that normally are present in the vagina (bacterial vaginosis) can also lead to cervical infection. Symptoms of the disease include There may be no symptoms. If symptoms are present, these may include: Abnormal vaginal bleeding that occurs after intercourse, or between periods Unusualvaginal discharge that does not go away: discharge may be gray, white or yellow in color, Painful sexual intercourse, Pain in the vagina, Pressure or heaviness in the pelvis, Painful urination, Vaginal itching, Women who may be at risk for chlamydia should be tested for this infection, even if they do not have symptoms [13].

xiv. Dysmenorrhea

Experience of lower back discomfort or abdominal pain during periods. But other women experience tremendous agony that makes it difficult for them to continue in their daily lives. Decrease of oxygen supply during the uterine contractions, is the main cause. Usually, as one matures especially after having a child things get better[14].

xv. Ovarian Cysts

Ovarian Cysts begins to form on and around the ovaries as a sac packed with fluid, also, they can be tumours. Typically, they disintegrate on their own, however doctor advises to use OCPs or oral contraceptives to hasten the process.

xvi. Endometriosis

A syndrome when the uterus' inner lining begins to protrude past the uterus' walls. However, it does occur on cervix, bladder, colon, or rectum. Often begins growing on the ovaries or fallopian tube. Abdominal pains, discomfort during sex, bleeding between periods, and even digestive issues are among the symptoms.

xvii. PCOD or Polycystic Ovarian Disease

Cysts usually grow inside the follicles that the ovaries create when PCOD is present. As a result, there will be fewer eggs, which may affect fertility, resulting in depression and mood changes.

xviii. Sexual assault

Studies has been reported that sexually assaulted females are at 42% higher risk of developing overall gynecological morbidity. A statistically significant increase in the risk of pelvic pain, dyspareunia, vulvovaginal pain, dysmenorrhea, abnormal menstrual bleeding and urinary incontinence has been reportedly found in the assaulted group. Among all the interviewed women, 38.1% did not report a history of sexual violence. Considering women with a history of sexual

violence, 54.8% of them reported having had sexual intercourse against their will at least once in their lifetime, without being forced to, while 23% explained some kind of coercion and 7.1% reported having been forced to have sex. Concluded that the prevalence of intimate partner violence in pregnant women ranged from 1%–20%, depending on the way by means of which the intimate partner violence is assessed and the population studied. Sexual violence also has consequences in the obstetric field as women who suffer it are at higher risk of having small for gestational age fetuses, babies with a low weight at birth and premature deliveries. Also patients with a history of sexual violence, a sexual dysfunction reportedly found, disorders of sexual interest/arousal, orgasm and genito pelvic pain/penetration are the most prevalent. This study used a cluster analysis to identify three patterns of sexual health risk behavior. Among women from the first cluster (high risk) significant increases in their frequency of sexual activity, number of sexual partners, infrequency of condom use and frequency of alcohol and/or drug consumption during sex were found when the after rape situation was compared to the pre-rape. The second cluster (moderate risk) showed an increased frequency of sexual activity and number of partners but mitigated that sexual health risk with an increase in the condom use. Finally, the third cluster (low risk) reported that their sexual health behavior had become much less risky after the rape.

The link between a history of sexual victimisation and an increased risk of gynaecological health issues most likely reflects the interaction of many causative pathways [14].

Physiology

The existence of lactobacilli, which make the vaginal pH acidic, is encouraged by maternal oestrogens. Oestrogen depletion results in the loss of lactobacilli and a decrease in the acidity of the vaginal pH, which again lowers infection resistance. Therefore, the main cause of this condition prevalence in this age group and its recurrence until the girl begins manufacturing her own oestrogen as she approaches puberty is the low amount of oestrogen in females.

One prospective study that did use asymptomatic girls as controls discovered that 77% of these girls had aerobic bacteria growing in their swabs, 65% had anaerobic bacteria, and 45% had both types. Staphylococcus epidermis (35%), enterococci (29%), Streptococcus viridans (13%), and lactobacilli (39%) were the particular species found [2].

Presentation

Vaginal discharge is the most frequent presenting symptom, followed by vulvar redness, burning, stinging, and pain. The discharge is intermittent and recurring, and it has a yellow, brown, or green tint. The severity of the illness ranges, from having no symptoms to being severe enough to keep the girl up at night or even prevent her from falling asleep. Examining the vulva reveals manifestations of various severity, from minor alterations to significant inflammation frequently accompanied by lichen identification or excoriation. Dysuria may result from the inflammation and excoriation, which frequently results in an initial misdiagnosis of a urinary tract infection.

In the hypothetical belief that the illness is caused by a candida infection, antifungals have frequently been used in the

past to treat patients. While examining female patients, it is most effective to have the child recumbent on her mother's lap. The greatest way to inspect older girls is while they are lying on the couch with their legs in the frog position. Inspection should be done on the entire perineum and perianal region. In either position, the labia can be gently separated to view the hymen and collect a sample from the fourchette or perineum. Thought should be given to whether it is essential to make an accurate bacterial diagnosis as individual episodes may due to new infections and involve different organisms. While examining the perineum, it is also useful to examine the girl's underwear for evidence of discharge and also to assess levels of hygiene[2][6].

Management

It can be quiet a challenging task to get rid of recurring vulvovaginitis. The cause of the issue, its recurrence, and the chance that the disease won't completely clear up until the patient reaches puberty must all be explained to patient. General hygiene instructions should, if necessary, be given, highlighting how crucial it is for the girl to thoroughly clean her bottom after defecating, wash it if necessary, and wipe from front to back. Considerations should be made regarding cotton pants, avoiding narrow jeans and tight leggings, wearing nightgowns instead of pyjamas and refraining from wearing pants to bed. Unflavored emollient lotions like zinc and castor oil establish a barrier and can help reduce irritation and dysuria. [2][8].

Statistical Analysis

Information obtained by professionals were their personal details, socioeconomic status, perceptions and practices as regards gynaecological symptoms, past experience of care, and obstetrical, gynaecological, and sexual history. The ladies underwent a comprehensive physical examination, which included a speculum examination and a bimanual pelvic examination; unmarried females with an intact hymen underwent a rectal examination as opposed to a vaginal one.

Gynaecological problem of some kind affected almost all women at some point in their life. While the majority of cases are curable and moderate, some can be significant and have repercussions that could affect fertility and, eventually, harm life. [8]

Case Study 1

Background: 400 female individuals were selected from the Obstetrics and Gynaecology Department's outpatient clinic at Sohag Teaching Hospital. Teenagers between the ages of 10 and 19 were selected with their verbal agreement.

Inclusion criteria: Circumcision problems, pubertal disorders, irregular menstruation, severe gynaecological issues, ongoing gynaecological issues, and persistent pelvic pain. Patients underwent thorough clinical evaluation, careful history taking, local examination, including fundal level and signs of hirsutism, and ultrasound evaluation of the uterus and ovaries. The general evaluation included age, weight, height, blood pressure, and BMI to detect underweight and obesity.

Regular laboratory inquiry was conducted, including regular blood pressure monioring. For pregnant patients, an ultrasound evaluation was performed. Each study case's data were entered into a unique clinical sheet. Except for pregnant individauls, all cases had hormonal testing for follicle-stimulating hormone (FSH), luteinizing hormone (LH), thyroid-stimulating hormone (TSH), serum prolactin, and total testosterone.

Results: According to residency, 224 (56%) were rural residents. There were 41 (10.3%) pregnant, 187 (46.8%) with premenstrual syndrome (PMS) dysmenorrhea, 25 (6.2%) with primary amenorrhea, 39 (9.8%) with secondary amenorrhea, 4 (1%) with cryptomenorrhea, 71 (17.8%) with vaginal infection, 31 (7.8%) with urinary tract infection (UTI), and 11 (2.8%) with hirsutism. There were four (1%) cases that had PMS dysmenorrhea and vaginal infection, two cases (0.5%) that had PMS dysmenorrhea and cryptomenorrhea, two cases(0.5%) that had PMS dysmenorrhea and primary amenorrhea, and one case (0.3%) that had UTI and primary amenorrhea.

Conclusion: Statistically significant relationship between UTI and demographic data was not that significant. There was no statistcally significant relationship between hirsutism and demographic data. Disorders had a strong statistically significant relationship with both age and education [3].

Case Study 2

Background: In the article, older adult women in India (aged 45-59) with gynaecological morbidity are discussed, as well as their treatment needs. Gynaecological health requirements for women extend beyond just the period when they are fertile. As they approach menopause and beyond, women are at risk for hormonal changes, gynaecological cancers, and different genitourinary disorders. Older women's sexual and reproductive health and rights (SRHR) issues are still taboo in many nations, of little interest to researchers and healthcare professionals, and a "blind spot" in general policy discussions. Although there is a lot of agreement, the life course approach to SRHR issues has gotten very little attention. In this study, the prevalence of gynaecological morbidity (GM) among older adult women in India aged 45-59 (N = 18,547) is estimated, as well as its correlates and treatment-seeking behaviour.

Inclusion Criteria: The Longitudinal Ageing Study (2016-2017) data were used for the analysis, and respondents were chosen using a multistage stratified area probability cluster sampling. The outcome variables "had any GM" and "sought treatment for any GM" were utilised in this analysis. Women were deemed to have GM if they had any morbidity, including vaginal bleeding, unpleasant-smelling discharge, uterus prolapses, mood swings or irritability, fibroid or cyst, or dry vagina that made sex difficult. Those responders with GM who sought medical advice or care were deemed to have "sought treatment for any GM." To investigate the adjusted impact of socioeconomic and demographic determinants of GM and treatment seeking, binary logistic regression was used. Statistical analyses were performed using Stata (V 16) with a 5% threshold of significance.

Results: Only 41% of the women with GM sought treatment, making only 15% of the total. Significant risk factors for GM included age, marital status, education, number of pregnancies, hysterectomy, role in home decision-making, social group, religion, wealth level, and geography. Women with a hysterectomy, a history of five or more pregnancies, and

those from the wealthiest households had higher odds of seeking treatment than their counterparts.

Conclusion: Many older adult women experience GM, and treatment-seeking is inadequate. The GM prevalence and treatment-seeking vary considerably by socioeconomic and demographic characteristics. Results suggested community-level awareness generation and the inclusion of this otherwise ignored group in programs targeting better health and wellbeing of women [4].

Case Study 3

Background: The aim of the study was to investigate the association between past sexual victimisation and gynaecological problems among college women. The size of these indirect relationships among people with different types of victimisation histories (childhood sexual abuse, adolescent/adult sexual assault, combined childhood sexual abuse/adolescent/adult sexual assault) was also examined, as well as whether anxiety and depression are mediators of this relationship.

Inclusion criteria: Online statistical study on lifetime sexual victimisation history, current anxiety and depression, and current gynaecological health complaints (dysmenorrhea, dyspareunia, vaginal discharge, pain during urination, and pelvic pain) were completed by a sample of 1,759 undergraduate cisgender women attending a major university in the Southeastern United States. To investigate the relationships between the study variables, mediation analyses with bootstrapping were carried out.

Results: In comparison to college women without a history of sexual victimisation, those women were considerably more likely to report having gynaecological health concerns in the previous month. For all three victimisation types, there was a sizable indirect pathway through both anxiety and depression from sexual victimisation to gynaecological health issues. Women with combined histories of childhood sexual abuse, adolescent sexual assault, and adult sexual assault had greater indirect routes than those with experiences of the other two categories of victimisation.

Conclusions: When treating gynaecological health symptoms in college-age women, healthcare professionals should adopt a trauma-informed strategy that acknowledges that sexual victimisation survivors are more likely to experience these problems. Additionally, melancholy and anxiety may act as risk factors for survivors' complaints of gynaecological problems [5]

Case Study 4

Background: Human papillomavirus (HPV) infection, especially persistent high- risk HPV, is associated with cervical cancer. Female reproductive tract microecological disorders and lower genital tract infections have been increasingly correlated with HPV infection and cervical lesions. Due to their common risk factors and transmission routes, coinfection with other sexually transmitted infections (STIs) has become a concern. Additionally, the clinical significance of Mycoplasma subtypes appear to vary. This study aimed to assess the correlations between common STIs and HPV infection, and to investigate the clinical significance of Mycoplasma subtypes.

Inclusion criteria: We recruited 1,175 patients undergoing cervical cancer screening at the Peking University First Hospital gynecological clinic from March 2021 to February 2022 for vaginitis and cervicitis tests. They all received HPV genotyping and detection of STIs, and 749 of them underwent colposcopy and cervical biopsy.

Results: Aerobic vaginitis/desquamative inflammatory vaginitis and STIs (mainly single STIs) were found significantly more often in the HPV-positive group than in the HPV-negative group. Among patients with a single STI, rates of infection with herpes simplex virus type 2 or UP6 in the HPV-positive group were significantly higher than in the HPV-negative group.

Conclusion: A connection between various Mycoplasma subtypes and HPV infection was discovered by thorough Mycoplasma typing. These findings imply that screening for vaginal microecological problems in HPV-positive individuals needs to be prioritised. In addition, women who are HPV-positive require more thorough testing because they are substantially more likely to develop lower genital tract infections, such as vaginal infections and cervical STIs [6].

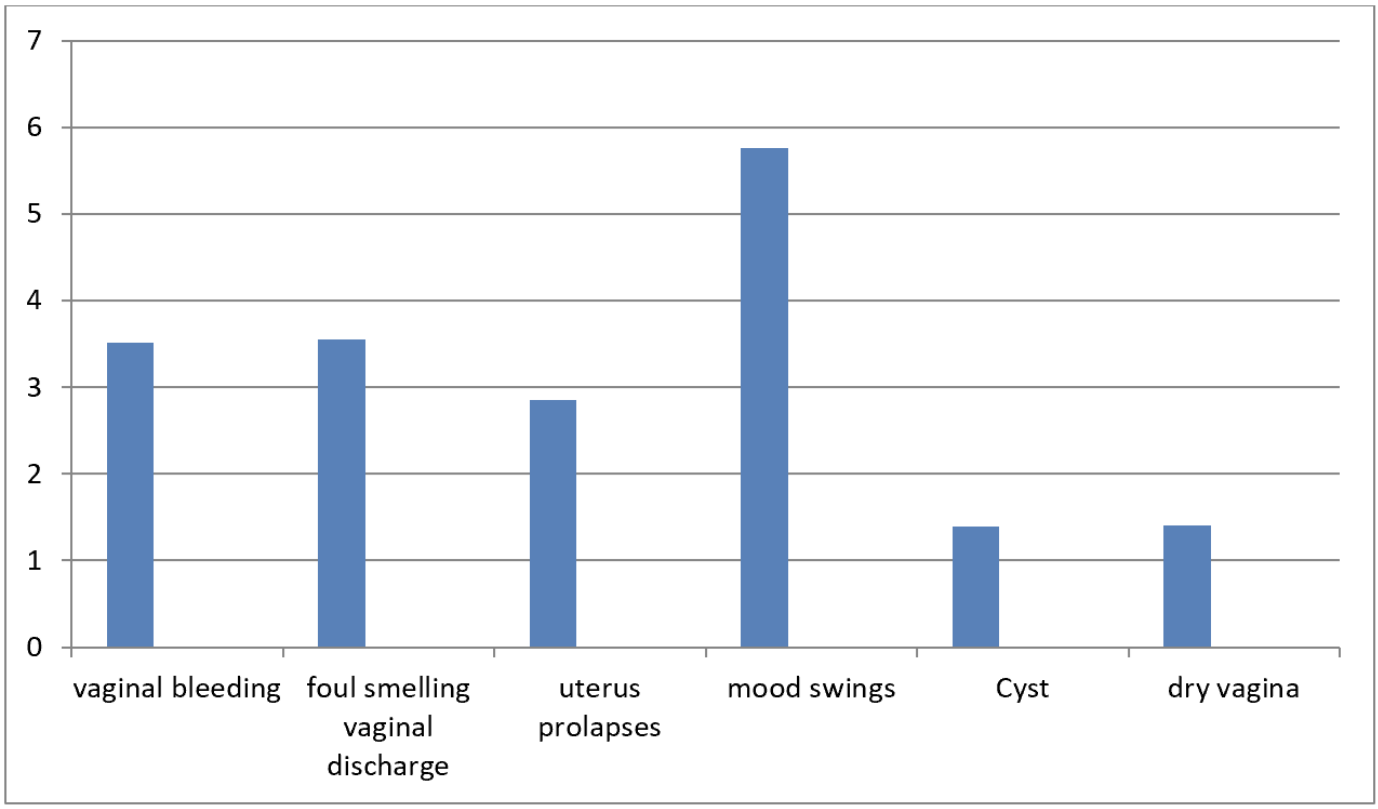

Table 1. Percentage of female population dealing with gynecological problems

Testing Parameters

i. The **21 HPV GenoArray Diagnostic Kit (HBGA-21PKG)** was used, with the Rapid Capture System, using a HPV genotyping macroarray for HPV identification. The kit detects 14 HR-HPV types (HPV16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, and 66), one suspected HR-HPV type (HPV53), and six low-risk HPV (LR-HPV) types (HPV6, 11, 42, 43, 44, and CP8304). The kit is used in accordance with analysis and to predict results of cell lysis, DNA extraction,

polymerase chain reaction (PCR) amplification, and hybridization [6][10].

1. A nucleic acid detection kit used to detect STI pathogens including UU, UP (UP1, 3, 6, and 14), CT, HSV-2, MH, MG, and NG. A **real-time PCR** fluorescence probe was used to detect the pathogenic STI microorganisms. This method is used for single and mixed infections. Liquid-based cytology test Exfoliated cervical cell specimens are collected using a conical cytobrush, placed into a tube containing 4 mL of preservation solution and temporarily stored at 4°C until testing [11].
2. Cervical cytology samples diagnosed by **ThinPrep® cytologic test (TCT).** Smear tests can be used to check the cervix for abnormal cells. A cervical smear is not intended to make a cancer diagnosis; rather, it is intended to look at the cervix's cellular health [13].
3. **Colposcopy test-** Frequency data being described as a percentage of cases, and co-occurrence of HPV and other bacteria are compared using chi-squared and Fisher's exact probability tests [7]
4. The diagnosis is made by excluding out other causes of bleeding by investigations such hormone profiles, pelvic ultrasounds, and examinations done under anaesthesia. Most of the patients with blood-stained discharge have a foreign body, which is most likely the cause of any confirmed vaginal bleeding. In order to rule out a foreign body, an ultrasound or x-ray examination is insufficient because materials like paper and cotton wool won't be seen. There must be given and anaesthetic before the examination. Most of the time, symptoms are completely gone after the foreign body is removed. A paediatric cystoscope, a hysteroscope, or a nasal speculum can all be used for examinations while under anaesthesia. If a person is sexually active and might have an STI, the doctor may order some diagnostic tests. These may involve using a **swab or small plastic loop** to collect sample cells from the vaginal wall[13].

Treatment

Antibiotics are used to treat chlamydia or gonorrhea. Medicines called antivirals may be used to treat herpes infections. Hormonal therapy (with estrogen or progesterone) may be used in women who have reached menopause. Specific treatment, if indicated if the child is symptomatic or if the mother prefers, is with topical oestrogen cream applied twice daily along the line of fusion, the treatment being continued until separation occurs, which is usually within about a month of therapy initiation. While other treatment includes is single dose of mebendazole 100 mg, treatment is also with potent topical steroids, such as clobetasol propionate 0.05%, applied twice daily for periods of up to 2 weeks. Metronidazole is the most common antibiotic treatment for BV. Clindamycin is an alternative antibiotic. It may work if metronidazole is not effective or if the infection recurs.

Clindamycin cream is the first-line treatment that a person applies inside their vagina. Symptoms usually resolve fairly quickly within a few weeks, with most of the patients responding to this therapy. Maintenance therapy is not required. While in many girls the condition resolves at puberty, this is not always the case and long-term follow up may be required. As the condition can involve the skin of the perianal area causing constipation, treatment with laxatives may also be required.

Betamethasone cream has been reported as a successful alternative to oestrogen but is not usually recommended.Surgical division is rarely indicated as there is still a risk of recurrence following surgery and subsequent adhesions may be more dense. Surgery should be restricted to the very small group of girls whose symptoms persist towards puberty and those who have serious problems associated with the condition. Nitroimidazole drug is also a drug of choice, specifically metronidazole (500 mg three times per day for 10 days), followed by a luminal infection cure such as tiliquinol-tilbroquinol (two tablets two times per day for 10 days) or diloxanide furoate. Discharge from the cervix, Redness of the cervix, Swelling (inflammation) of the walls of the vagina

Tinidazole is another antibiotic that can treat BV. Treatment of the luminal infection is needed to avoid a relapse. Apart from these precaution should also be taken care of while using latex condoms, diaphragms, cervical caps.

Statistical Data Analysis

Table 2. Statistical data analayis of Patient profile studied

S. No.	Hospital	Location	Sample size	Year	Age (in years)
1	Alder Hey Children's Hospital NHS Foundation Trust	Liverpool UK	250	2010	10-19
2	Obstetrics and Gynecology Department	Sohag Teaching Hospital	400	-	10-19
3	Cervical cancer screening at gynecological clinic	Peking University First Hospital	1,175	March 2021 to February 2022	19-50
4	United states	Southeastern U.S. university	1,759	2016-2017	18-24
5	United kingdom	Samaritan Hospital for Women, London	32	-	12-45
6	Maharashtra, India	Gadchiroli district	650	-	11-32
7	Brazil	-	100	-	15-49

Result

According to reviewed survey, the frequency of gynaecological or sexual disorders were exceptionally high (92%) problems per woman. 50% of the burden was caused by infections like vaginitis, cervicitis, and pelvic inflammatory disease. Another significant category of illnesses is menstrual problems, and genital tract infection may be a contributing factor. There were very few cases of uterine fibroids, and no cases of cancer were discovered. The extremely high prevalences of iron deficiency anaemia (83%) and vitamin A insufficiency (58%) in this region, and among women in particular, are a result of the region's generally low economic position. Thus, just 98% women reported having too much discomfort during their periods, but after rigorous investigation, it was discovered that most of them had dysmenorrhea.

There is some validity to the women's notion that using female contraception leads to gynaecological issues because there is a statistically significant link between various gynaecological conditions and using female contraception in the past or present. However, given that 78% of the perpetually married women had never used any such contraception and had a high frequency of disease, this can only account for a tiny percentage of the morbidity.

Discussion

The unexpected success of the non-directive counselling group might suggest that merely allowing the patient to talk about whatever she feels concerned about. It seems likely, however, that the therapist, despite attempts to remain as non-directive as possible, may have used her experience to encourage discussion of those topics she felt were most likely to be sources of emotional distress. Pain reduction may then have been related to reduction in stress. This may have been effective at both a physiological (reduction in EMG or blood flow) and a psychological level (distraction, altering behaviour). This may have been threatening to some women as they felt that psychological factors could only be involved in ‘imaginary’ pain.

One general point that is important to note concerns the physical location of the psychologist or therapist involved in the treatment of gynaecological patients. When the psychologist (SP) first started working in this area patients were referred to her in the psychiatric unit where she works. The result was that very few patients attended their initial appointments. Those who did admitted feeling rejected by their gynaecologist and believed that their pain was not being taken seriously. As a result a room was made available in the gynaecology clinic and patients were seen immediately after their first consultation with the gynaecologist. Consequently anyfears the patients had about what referral to the psychologist involved could be dealt with immediately and, if necessary, the patient could be seen by the psychologist and the gynaecologist together.

Menstrual disorders being the most prevalent issue, affecting 64.5% of people, followed by adolescent pregnancies (20.9%). Menorrhagia and polymenorrhea were reported in 23.6% of girls, whereas oligomenorrhea, including secondary amenorrhea, are the most prevalent menstrual disorder. Overall, 4% of teenage females had primary amenorrhea, according to the study. Menorrhagia/polymenorrhea was seen in early adolescent females, followed by oligomenorrhea/secondary amenorrhea; the trend was reversed in the late teenage group. This demonstrates that early teenage groups often have puberty menorrhagia, whereas late adolescent groups are more likely to experience polycystic ovary syndrome (PCOS).
In the present study, we found that there was a high statistically significant relation between pregnancy and age, education, and residence. Teenage pregnancies (20.9%) and its vices continue to plague adolescent females reproductive health. This worrying condition may be caused mostly by early marriages (23.18%), lack of education (8.18%), school dropouts (20%), ignorance of safe-sex practices, and sex inequity. Adolescent pregnancy was seen in 10.66% of instances, which is a prevalent issue in developing nations like India. Teenage pregnancy is an issue that endangers both the long-term health of the fetus and the mother. These females often engage in unsafe sexual activity, making them susceptible to sexually transmitted diseases.

Conclusion

Gynaecological conditions are common among wide variety of female population but is rarely serious. They do, however, cause concern to the girl's parents and among family and hence careful, informed and sensitive management is required.The most frequent cause of gynecological OPD consultation in female population is menstrual issues. Before assuming that bleeding issues in female population are a natural physiological transition, it is appropriate to evaluate these issues. Although only manimal percentage of patients in the gynecological outpatient department are teenagers, their care is crucial for their future reproductive health because adolescent gynecological disorders are distinct in how they appear, are diagnosed, and are treated. And hence seperate clinics with friendly female staff are required in crowded outpatient departments to provide female individuals in a private place to talk about their issues without feeling embarrassed.

References

1. ^*https://www.apollocradle.com/5-most-common-gynaecological-problems/*
2. a, b, c, d, e, f, g, h, i, j, k*Garden AS. Vulvovaginitis and other common childhood gynaecological conditions. Archives of Disease in Childhood-Education and Practice. 2011 Apr 1;96(2):73-8.*
3. a, b*Morris BJ, Hankins CA, Banerjee J, Lumbers ER, Mindel A, Klausner JD, Krieger JN. Does male circumcision reduce women's risk of sexually transmitted infections, cervical cancer, and associated conditions?. Frontiers in public health. 2019 Jan 31;7:4.*
4. a, b*EL-Kattatny HH, Sileem SA, Foad AM. Gynecological Problems Seen in Teenage Girls in Sohag Governorate. Al-Azhar International Medical Journal. 2023;4(1):9.*
5. a, b, c, d*Pradhan, M. R., Mondal, S., & Mudi, P. K. (2023). Gynecological morbidity and treatment-seeking among older adult (aged 45–59) women in India. Reproductive Health, 20(1), 1-11.*
6. a, b, c, d*Bi H, Zhang D, Xiao B. Association between human papillomavirus infection and common sexually transmitted infections, and the clinical significance of different Mycoplasma subtypes. Frontiers in Cellular and Infection Microbiology. 2023 Mar 16;13:238.*
7. a, b*Littleton H, Wright L, Dodd JC, Higgins M. Gynecological health complaints among college women with sexual victimization histories: examination of depression and anxiety as potential mediators. Women's health issues. 2023 Jan 1;33(1):105-12.*
8. a, b, c, d*Bang RA, Baitule M, Sarmukaddam S, Bang AT, Choudhary Y, Tale O. High prevalence of gynaecological diseases in rural Indian women. The lancet. 1989 Jan 14;333(8629):85-8.*
9. ^*Donders GG, Bellen G, Rezeberga D. Aerobic vaginitis in pregnancy. BJOG: An International Journal of Obstetrics & Gynaecology. 2011 Sep;118(10):1163-70.*
10. a, b*Reichman O, Sobel J. Desquamative inflammatory vaginitis. Best practice & research Clinical obstetrics & gynaecology. 2014 Oct 1;28(7):1042-50.*
11. a, b*Schwebke JR, Burgess D. Trichomoniasis. Clinical microbiology reviews. 2004 Oct;17(4):794-803.*

12. ^*Blostein F, Levin-Sparenberg E, Wagner J, Foxman B. Recurrent vulvovaginal candidiasis. Annals of Epidemiology. 2017 Sep 1;27(9):575-82.*
13. a, b, c *Reed BD. 13.1. VAGINITIS AND CERVICITIS. Manual of Family Practice. 2002;43:383.*
14. a, b *Escura Sancho S, Anglès Acedo S, Ribera Torres L, Castelo-Branco Flores C. Sexual and gynecological health in women with a history of sexual violence: the role of the gynecologist. Clinical And Experimental Obstetrics & Gynecology, 2022, vol. 49, num. 3. 2022 Mar 8.*