UNIT 1 GYNAECOLOGICAL CONDITIONS

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1.0 INTRODUCTION

In Block 2, you learned normal phenomenon of adolescent and women’s health. Here you will learn about common gynaecological problems of adolescent and adult women.

More emphasis will be given to the following conditions:

- Dysmenorrhoea
- Pre Menstrual Syndrome (PMS)
• Vaginal discharge
• Mastitis
• Breast lump
• Pelvic pain
• Pelvic organ prolapse

1.1 OBJECTIVES

After completing this unit, you should be able to:
• enumerate common gynaecological problems;
• describe dysmenorrhoea;
• discuss pre menstrual syndrome;
• identify the causes of vaginal discharge;
• discuss the breast pain;
• identify the breast lump;
• discuss the management of pelvic pain; and
• discuss the management of pelvic organ prolapse.

1.2 DYSMENORRHOEA

Dysmenorrhoea is a menstrual condition characterised by severe and frequent menstrual cramps and pain associated with menstruation. Pain may occur with menses or precede menses by 1 to 3 days. Pain tends to peak 24 hour after onset of menses and subside after 2 to 3 days. It is usually sharp but may be cramping, throbbing, or a dull constant ache; it may radiate to the legs.

While most women experience minor pain during menstruation, dysmenorrhoea is diagnosed when the pain is so severe as to limit normal activities, or require medication.

1.2.1 Types of Dysmenorrhoea

There are two types of dysmenorrhoea – primary and secondary dysmenorrhoea.

Primary Dysmenorrhoea: Often it begins soon after teen ages starts having periods. Pain is severe and frequent menstrual cramping caused by severe and abnormal uterine contractions. Symptoms may include backache, leg pain, nausea, vomiting, diarrhoea, headache and dizziness.

Risk factors for primary dysmenorrhoea are:
• early age at menarche (<12 year),
• nulliparity,
• heavy or prolonged menstrual flow,
• smoking,
• alcohol,
• positive family history and obesity or overweight.
Secondary Dysmenorrhoea: Secondary dysmenorrhoea has causes other than menstruation and natural production of prostaglandins. Secondary dysmenorrhoea is caused by medical problem(s) such as endometriosis, adenomyosis, pelvic inflammatory disease, uterine fibroids, cervical narrowing, uterine malposition, tubo-ovarian abscess, ovarian torsion, ovarian cysts, pelvic tumors or an IUD (intra-uterine device). This condition usually occurs in older women.

1.2.2 Pathophysiology and Signs and Symptoms

During menstrual cycle, the endometrium thickens in preparation for potential pregnancy. After ovulation, if the ovum is not fertilised and there is no pregnancy, the built-up uterine tissue is not needed and thus shed.

Molecular compounds called prostaglandins are released during menstruation, due to the destruction of the endometrial cells, and the resultant release of their contents. Release of prostaglandins and other inflammatory mediators in the uterus cause the uterus to contract. These substances are thought to be major factor in primary dysmenorrhoea. When the uterine muscles contract, they constrict the blood supply to the tissue of the endometrium, which, in turns, breaks down and dies. These uterine contractions continue as they squeeze the old, dead endometrial tissue through the cervix and out of the body through the vagina. These contractions, and resulting temporary oxygen deprivation to nearby tissues, are responsible for the pain or “cramps” experienced during menstruation.

Compared with other women, females with primary dysmenorrhoea have increased activity of the uterine muscle with increased contractility and increased frequency of contractions.

Signs and symptoms

You should educate the adolescents or young women that symptoms of dysmenorrhoea may resemble other conditions or medical problems. Always consult physician for a diagnosis.

The main symptoms of dysmenorrhoea are:

- pain concentrated in the lower abdomen
- in the umbilical region or
- the suprapubic region of the abdomen
- right or left abdomen
- may radiate to the thighs and lower back.

Other symptoms may include:

- nausea and vomiting
- diarrhoea or constipation
- headache
- dizziness
- disorientation
- hypersensitivity to sound
- smell
- fainting and fatigue.
Symptoms of dysmenorrhoea often begin immediately following ovulation and can last until the end of menstruation. This is because dysmenorrhoea is often associated with changes in hormonal levels in the body that occur with ovulation. The use of certain types of birth control pills can prevent the symptoms of dysmenorrhoea, because the birth control pills stop ovulation from occurring.

1.2.3 Diagnosis and Management

Your role here is mainly assisting for diagnosis. As diagnosis begins with a gynaecologist evaluating a female’s medical history and a complete physical examination including a pelvic examination. A diagnosis of dysmenorrhoea can only be certain when the physician rules out other menstrual disorders, medical conditions, or medication that may be causing or aggravating the condition. In addition, some procedures mainly used in secondary dysmenorrhoea are:

**Ultrasound:** A diagnostic imaging technique which uses high-frequency sound waves and a computer to create images of blood vessels, tissues, and organs. Ultrasounds are used to view internal organs as they function, for any presence of lesions like fibroid, adenomyosis and ovarian cysts. It also helps to assess the blood flow through various vessels.

**Magnetic resonance imaging:** An MRI uses a combination of large magnets, radiofrequencies, and a computer to produce detailed images of organs and structures within the body. May be used if ultrasound is inconclusive and an organic lesion is suspected.

**Laparoscopy:** A minor surgical procedure in which a laparoscope, a thin tube with a lens and a light, is inserted through a small incision near umbilicus in the abdominal wall. Using the laparoscope to see in the pelvic and abdomen area, the physician can often detect abnormal growths. It is useful to diagnose endometriosis.

**Hysteroscopy:** A visual examination of the canal of the cervix and the interior of the uterus using a viewing instrument (hysteroscope) inserted through the vagina. It is useful in diagnosis of sub mucous fibroids or polyps.

**Laboratory studies:** The investigations to be performed should be chosen based on clinical diagnosis. Complete blood count (with differential), for evidence of infection, urinalysis, to exclude urinary tract infection, quantitative human chorionic gonadotropin level, to exclude ectopic pregnancy, gonococcal/chlamydial cultures, enzyme immunoassay (EIA), and DNA probe testing, to exclude sexually transmitted infections (STIs)/pelvic inflammatory disease (PID), stool guaica, to rule out GI bleeding and Erythrocyte sedimentation rate (ESR) for subacute salpingitis.

**Management of primary and secondary dysmenorrhoea:**

For treatment of primary dysmenorrhoea, most doctors prescribe antiprostaglandin drugs or NSAIDS (non-steroidal anti-inflammatory drugs) such as aspirin, ibuprofen, ketoprofen or naproxen. These drugs inhibit synthesis of prostaglandins, lessen the contractions of the uterus and reduce the menstrual flow. These drugs should be started at the onset of bleeding to avoid inadvertent use during early pregnancy and taken for 2–3 days. Oral contraceptives are another alternative especially if the woman needs a contraceptive method. By stopping ovulation and decreasing prostaglandin levels, they may eliminate cramps.

Treatment of secondary dysmenorrhoea depends on the cause. Endometriosis is the most common cause of secondary dysmenorrhoea. Depending on the stage of
this disease and the women’s age and desire to have children, the treatment methods vary from conservative drug therapy (oral contraceptives, androgens, progestins, and gonadotropin-releasing hormone agonists) to surgical procedures.

If the problem is adenomyosis, a hysterectomy may be necessary. Pelvic inflammatory disease may be treated with antibiotics. Uterine fibroids, fibroid tumors and pelvic tumors and often treated surgically. Cervical narrowing can be corrected with surgery as well.

Occasionally, an IUD (intra-uterine device) may be the cause, and if so, the doctor may prescribe anti prostaglandin drugs, and suggest removing the device and using another form of birth control only if the patient is not responding to NSAIDS.

Several nutritional supplements have been indicated as effective in treating dysmenorrhoea, including omega-3 fatty acids, magnesium, vitamin E, zinc and thiamine (vitamin B1). Several non-drug therapies for dysmenorrhoea have been studied, including behavioural, acupuncture, acupressure, and chiropractic care.

**Nursing Management**

For relief of painful menstrual cramps and their associated discomforts, start with a hot bath. The water helps relax the uterus and other tensions that may be contributing to the problem. Place a heating pad on abdomen. The flow of heat can provide soothing, temporary pain relief. Exercise regularly. Aerobic exercise such as walking, swimming, running, bicycling, and aerobic dance may diminish cramping symptoms. For some women, exercise may inhibit prostaglandins or help release endorphins, the brain’s natural painkillers.

When the women reports with painful periods, you should know

1) **When to refer** – When pain is not relieved by above mentioned steps advised by you.

2) **Medication** – It can be prescribed as per protocol.

3) **Where to refer** – Considering the unchanging condition of the patient, she should be referred to the next higher medical facility (PHC/CHC/DH) nearby.

4) **Follow up** – It is necessary to follow up of the cases referred by you and inquire regarding the condition and relief of systems.

### 1.3 PREMENSTRUAL SYNDROME (PMS)

You should educate adolescents and young women that premenstrual syndrome (PMS) or premenstrual tension (PMT) is a combination of physical, psychological, emotional and mood disturbances that occur after a woman’s ovulation and typically ending with the onset of her menstrual flow.

The most common mood-related symptoms are irritability, depression, crying, oversensitivity, and mood swings with alternating sadness and anger. The most common physical symptoms are fatigue, bloating, breast tenderness (mastalgia), acne, and appetite changes with food cravings. An estimated 3 of every 4 menstruating women experience some form of premenstrual syndrome. These problems tend to peak in your late 20s and early 30s.

A more severe form of PMS, known as premenstrual dysphoric disorder (PMDD), also known as late luteal phase dysphoric disorder occurs in a smaller number of
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women and leads to significant loss of function because of unusually severe symptoms.

1.3.1 Cause and Risk Factors

Exactly what causes premenstrual syndrome is unknown, but several factors may contribute to the condition:

**Cyclic changes in hormones**: PMS appears to be caused by multiple endocrine factors (eg, hypoglycemia, other changes in carbohydrate metabolism, hyperprolactinemia, fluctuations in levels of circulating estrogen and progesterone, abnormal responses to estrogen and progesterone, excessive aldosterone or ADH. Estrogen and progesterone can cause transitory fluid retention, as can excess aldosterone or ADH. Signs and symptoms of premenstrual syndrome change with hormonal fluctuations and disappear with pregnancy and menopause.

**Chemical changes in the brain**: Fluctuations of serotonin, a brain chemical (neurotransmitter) that is thought to play a crucial role in mood states, could trigger PMS symptoms. Insufficient amounts of serotonin may contribute to premenstrual depression, as well as to fatigue, food cravings and sleep problems.

Preliminary studies suggest that up to 40% of women with symptoms of PMS have a significant decline in their circulating serum levels of beta-endorphin. Endorphins are “feel good” hormones. Normal cheerful happy moods and also make people less sensitive to pain. A small amount of these “feel good endorphins usually circulate in the body, but these levels drop during the luteal phase of the menstrual cycle. In some women, falling endorphin levels may lead to nausea, and various types of pain.

**Depression**: Some women with severe premenstrual syndrome have undiagnosed depression, though depression alone does not cause all of the symptoms. Low serotonin levels are commonly associated with depression.

**Poor eating habits**: Some PMS symptoms have been linked to low levels of vitamins and minerals. Low level vitamin A, Vitamin B6, and Vitamin E may play a role in PMS. Other possible contributors to PMS include eating a lot of salty foods which may cause fluid retention, drinking alcohol and caffeinated beverages which may cause mood and energy level disturbances.

**Genetic factors**: Genetic factors also seem to play a role, as the concordance rate is two times higher in monozygotic twins than in dizygotic twins.

**Other risk factors**: Increasing age, tobacco use, family history and stress may participate condition.

1.3.2 Pathophysiology and Signs and Symptoms

Let us learn how changes in the uterus takes place and signs and symptoms follows as given below:

<table>
<thead>
<tr>
<th>Premenstrual syndrome occurs during the luteal phase of the menstrual cycle.</th>
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</thead>
<tbody>
<tr>
<td>This phase occurs immediately after an egg is released from the ovary and lasts from day 14 through day 28 of a normal menstrual cycle.</td>
</tr>
</tbody>
</table>
During the luteal phase, hormones from the ovary cause the lining of the uterus to grow thick and spongy.

At the same time, an egg is released from the ovary. If the egg meets sperm, it may implant in the lining of the uterus and grow.

At this time, the level of the hormone called progesterone rises in the body, while the level of another hormone, estrogen, begins to drop.

The shift from estrogen to progesterone may cause some of the symptoms of PMS.

**Signs and symptoms**

A great variety of symptoms have been attributed to PMS. Women can have PMS of varying duration and severity from cycle to cycle.

**A. Emotional and Behavioural Symptoms**

- Tension or anxiety
- Depressed mood
- Crying spells
- Anger and irritability
- Oversensitivity
- Dysphoria (unhappiness)
- Mood swings
- Food cravings (craving for sweets)
- Appetite changes with overeating
- Trouble falling asleep (insomnia)
- Social withdrawal
- Poor concentration

**B. Physical Signs and Symptoms**

- Joint or muscle pain
- Headache
- Fatigue
- Weight gain from fluid retention
- Abdominal bloating (due to fluid retention)
- Abdominal cramps
- Breast tenderness
- Acne flare-ups
- Constipation or diarrhoea
- Changes in libido
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- Sleep disturbances with sleeping too much or to little (insomnia)
- Appetite changes with overeating or food cravings

1.3.3 Diagnosis and Management

You can help an adolescent or adult woman in diagnosis by educating that the most helpful diagnostic tool is the menstrual dairy, which documents physical and emotional symptoms over month. If the changes occur consistently around ovulation (mid cycle, or days 7–10 into the menstrual cycle) and persist until the menstrual flow begins, then PMS is probably the accurate diagnosis. Keeping a menstrual dairy not only helps the health care provider to make the diagnosis, but it also promotes a better understanding by the patient of her own body and moods. Once the diagnosis on PMS is made and understood, the patient can better cope with the symptoms.

The diagnosis of PMS can be difficult because many medical and psychological conditions can mimic or worsen symptoms of PMS. There is no laboratory test to determine if a woman has PMS. When laboratory tests are performed, they are used to exclude other conditions that can mimic PMS.

Management

The management of PMS can sometimes be a challenging as making the diagnosis of PMS. Various treatment approaches have been used to treat this condition. There is no cure for PMS, but eating a healthy diet, exercise regularly and taking medicine may help.

General management includes a healthy lifestyle as given below:

- Aerobic exercise
- Avoid salt before the menstrual period
- Reduce caffeine intake
- Quit smoking
- Reduce intake of refined sugars
- Increase of fiber intake
- Reduce alcohol intake
- Adequate rest and sleep

All of above have been recommended and may help to reduce symptoms in some women. Furthermore, some studies suggest that vitamin B6, vitamin E, calcium and magnesium supplements may have some benefit, to reduce PMS.

Commonly prescribed medications for premenstrual syndrome

A variety of medications are used to treat the different symptoms of PMS. Medications include diuretics, pain killers, oral contraceptive pills, drugs that suppress ovarian function, and antidepressants. Let us go through in brief about these drugs:

- **Diuretics:** When exercise and limiting salt intake aren’t enough to reduce the weight gain, swelling and bloating of PMS, taking diuretics, water pills, can help body shed excess water through kidneys. Spironolactone is a diuretic that can help ease some of the symptoms of PMS.
• **Analgesics:** These are commonly given for menstrual cramps, headache and pelvic discomfort. The most effective group of analgesics appears to be the nonsteroidal anti-inflammatory medications (NSAIDs). Examples of these are ibuprofen (Advil), naproxen (Anaprox) and mefenamic acid (ponstel).

• **Oral contraceptives:** These prescription medications stop ovulation and stabilise hormonal swings, thereby offering relief from PMS symptoms. Yaz, a type of birth control pill containing the progestin drospirenone, which acts similarly to the diuretic. Spironolactone has been shown to be given more effective than regular birth control pills are reducing the physical and emotional symptoms of PMS.

• **Ovarian suppressors:** Drugs like danazol (donocrine) have been prescribed to suppress ovarian hormone production. For severe PMS or PMDD, Depo-Provera (Medroxy-progesterone acetate) injection can be used to temporarily stop ovulation.

• Complete suppression of ovarian function by a group of drugs called gonadotropin-releasing hormone (GnRH) analogs has been found to help some women with PMS.

• **Antidepressants:** Used if there is associated depression. Selective serotonin re-uptake inhibitors (SSRIs), which include fluoxetine (Prozac, Sarafem), paroxetine (Paxil). Sertraline (Zoloft) and others, have been successful in reducing symptoms such as fatigue, food cravings and sleep problems and are the first line agent for treatment of severe PMS or PMDD. These drugs are generally taken daily. But for some women with PMS, use of antidepressants may be limited to the two weeks before menstruation begins.

**Prevention**

Preventive measures are usually life style changes required to be taken as follows:

1) Engage in atleast 30 minutes of brisk walking, cycling, swimming or other aerobic activity during most days of the week. Regular daily exercise can help improve your overall health and alleviate symptoms such as fatigue and depresses mood.

2) Learn and use stress management techniques such as progressive muscle relaxation, deep breathing, and meditation, a warm bath, listening to music, or yoga in day.

3) Eat smaller, more frequent meals to reduce bloating and the sensation of the fullness.

4) Limit salt and salty food to reduce bloating and fluid retention.

5) Choose foods high in complex carbohydrates, such as fruits, vegetables and whole grains.

6) Choose food rich in calcium. If you cannot tolerate dairy products or aren’t getting adequate calcium in your diet, you may need a daily calcium supplement.

7) Take a daily multivitamin supplement.

8) Limit caffeine and alcohol. Caffeine can make breast tenderness worse and increase headaches.
Vitamin Therapy

1) Vitamin B6– 100 mg per day maximum (larger doses sometimes cause serious side effects) you can also take a B- complex that includes all the B vitamins. Vitamin B6 may take the edge off irritability and reduce fatigue and depression.

2) Vitamin E - 400 IU per day (maximum) may be helpful in reducing breast tenderness.

3) Calcium - 1,000 – 1,200 mg per day of the elemental calcium (the labels on foods and supplements give the amount of elemental calcium they contain) may reduce bloating, body aches, anxiety, or depression.

4) Magnesium - 400 mg per day in combination with vitamin B6 may reduce pain, water retention, and negative mood.

Nursing Management

For relief of signs and symptoms of premenstrual syndrome (PMS), encourage / advise aerobic exercises, increase in fibre intake, reduced caffeine and salt intake, adequate rest and sleep. You can prescribe vitamin and calcium supplements to relieve.

Symptoms

1) **When to refer** – If PMS is not relieved by above measures then refer

2) **Medication** –Prescribe medication as per protocol
   - Diuretics
   - Oral contraceptives
   - Antidepressants
   - Analgesics
   - Ovarian suppressors

3) **Where to refer** – considering the no change in the condition of the patient she should be referred to the next higher medical facility (PHC/CHC/DH), nearby.

4) **Follow Up** – It is necessary to do follow up. If the case referred by you then enquire regarding the condition and relief of symptoms and further course of action must be discussed.

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**Check Your Progress 1**

1) List main symptoms of Dysmenorrhoea.
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   ................................................................................................................

2) List laboratory studies for diagnosis.
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3) Explain the term PMS.
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4) Discuss preventive measures for PMS.
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1.4 VAGINAL DISCHARGE

Vaginal discharge refers to secretions from the vagina and such discharge can vary in:

Consistency (thick, pasty, thin), colour (clear, cloudy, white, yellow green) and smell (normal, odourless, bad odour).

Fluid made by glands inside the vagina and cervix carries away dead cells and bacteria. This keeps the vagina clean and helps prevent infection. Vaginal discharge that suddenly differs in colour, odour, or consistency, or significantly increases or decreases in amount, may indicate an underlying problem like an infection.

1.4.1 Type of Vaginal Discharge and Their Possible Cause

<table>
<thead>
<tr>
<th>Type of Discharge</th>
<th>What it might Mean</th>
<th>Other Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloody or brown</td>
<td>Irregular menstrual cycles, Or cervical or uterine cancer</td>
<td>Abnormal vaginal bleeding, pelvic pain</td>
</tr>
<tr>
<td>Cloudy or yellow</td>
<td>Gonorrhoea</td>
<td>Lower abdominal pain, bleeding between periods, urinary incontinence</td>
</tr>
<tr>
<td>Frothy, yellow or greenish with a bad smell</td>
<td>Trichomoniasis</td>
<td>Pain and itching while urinating</td>
</tr>
<tr>
<td>Pink</td>
<td>Shedding of uterine lining after childbirth (lochia)</td>
<td></td>
</tr>
<tr>
<td>Thick, white, cheesy</td>
<td>Yeast infection</td>
<td>Swelling and pain around the vulva, itching, painful sexual intercourse</td>
</tr>
<tr>
<td>White, gray or yellow</td>
<td>Bacterial vaginosis with fishy odour</td>
<td>Itching or burning, redness and swelling of the vagina or vulva</td>
</tr>
</tbody>
</table>

1.4.2 Causes and Risk Factors, Sign and Symptoms

One of the most frequently experienced medical symptoms of girls and women is abnormal vaginal discharge. Possible cause for an increase in the amount of normal vaginal discharge include:

- emotional stress
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- ovulation
- pregnancy
- breastfeeding, and sexual excitement
- Antibiotic or steroid use
- Vaginitis
- Birth control pills
- Cervical or vaginal cancer
- Diabetes
- Douches, scented soaps or lotions, bubble bath
- Pelvic infection after surgery
- Pelvic inflammatory disease (PID)
- Vaginal atrophy
- Forgotten tampon or foreign body
- Sexually transmitted diseases.

**Signs and symptoms**

Some signs that may indicate an abnormal vaginal discharge and infection include:

- Changes in colour, consistency, or amount
- Constant, increased vaginal discharge
- Presence of itching, discomfort or any rash
- Vaginal burning during urination
- The presence of blood when it is not your period time
- Cottage cheese-like vaginal discharge
- A foul odour accompanied by yellowish, greenish, or grayish white discharge.

**1.4.3 Prevention for Abnormal Vaginal Discharge**

Many factors can play a role in the occurrence of vaginal infections and discharge. You should advice for practicing these simple tips which significantly may reduces risk of getting a vaginal infection: These are as given below:

<table>
<thead>
<tr>
<th>Do’s</th>
<th>Don’ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always wear cotton panties. Cotton allows genital area to breathe. Helping it stay dry. It’s also a good idea to wear panties only during the day and not a night when you are sleeping.</td>
<td>Don’t use vaginal douches.</td>
</tr>
<tr>
<td>If you are being treated for a vaginal infection, use all the medication as directed, even you think you are better.</td>
<td>Never use petroleum jelly or oils for vaginal lubrication. This can create a breeding ground for bacteria to grow.</td>
</tr>
<tr>
<td>Do’s</td>
<td>Don’ts</td>
</tr>
<tr>
<td>--------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Avoid vaginal contact with products that can irritate the vagina, such as feminine hygiene products, perfumed or deodorant soaps, powders, lotions, and bubble baths.</td>
<td>Don’t have sexual intercourse during treatment for a vaginal infection. Wait until you have no more symptoms.</td>
</tr>
<tr>
<td>Avoid wearing tight-fitting clothing’s, such as bathing suits, exercise wear, pantyhose for prolonged periods of time.</td>
<td>Many times, vaginal infections cause intense itching; don’t scratch, scratching infected, inflamed areas will only make things worse.</td>
</tr>
<tr>
<td>Always use condoms during sexual intercourse unless patient is in a long-term monogamous relationship.</td>
<td>If patients are self-treating a vaginal infection and symptoms have not improved after treatment, see health care providers, for a vaginal exam. Don’t use any vaginal products or treatments for 48 hours before appointment.</td>
</tr>
<tr>
<td>Always wipe from front to back after urination or having a bowel movement. Improper wiping easily spreads bacteria to the vagina and may lead may to vaginal discharge and infection.</td>
<td></td>
</tr>
</tbody>
</table>

**Nursing Management**

For relief of signs and symptoms of vaginal discharge, you need to understand the causes as discussed in Sub-section 1.4.2 above.

Counsel the patient to wear cotton undergarments, avoid wearing tight-fitting clothings, maintain perineal hygiene, use condom during sexual intercourse. When you see that the patient has no relief from vaginal discharge, you should follow the following steps:

1) **When to refer** – When there is no relief from vaginal discharge after follow up the advice.

2) **Medication** – to be prescribed as per protocol.

3) **Where to refer** – If the condition of the patient with vaginal discharge does not improve refer the case to next higher medical facility nearby.

4) **Follow up** – Follow up the cases that have been referred from your health centre and assess the present condition.

1.5 **MASTITIS**

Mastitis is an infection of the tissue of the breast that occur most frequently during the time of breastfeeding. This infection causes pain, swelling, redness, and increases temperature of the breast. It can occur when bacteria, often from the baby’s mouth, enter milk duct through a crack in the nipple. This causes an infection and painful inflammation of the breast.
Breast infections most commonly occur one to three months after the delivery of a baby, but they can occur in women who have not recently delivered as well as in women after menopause. Other causes of infection include chronic mastitis and a rare form of cancer called inflammatory carcinoma. A breast infection that leads to an abscess (a localised pocket or collection of pus) is a more serious type of infection. If mastitis is left untreated, an abscess can develop in the breast tissue.

1.5.1 Types of Mastitis

There are normally two types of Mastitis, one is puerperal mastitis, occurs in pregnancy, during lactation or weaning. It is due to blocked milk or excess milk whereas non puerperal mastitis is not related to these situations. Another one is non puerperal mastitis. The term nonpuerperal mastitis describes inflammatory lesions of the breast occurring unrelated to pregnancy and breastfeeding. Names for non-puerperal mastitis are not used very consistently and include Mastitis, Subareolar Abscess, Duct Ectasia, Periductal Inflammatory, Zuska’s Disease and others.

1.5.2 Cause, Risk Factors and Sign and Symptoms

Teach the community about causative and risk factors of breast problems. It is now recognised that mastitis is most often caused by “milk stasis”. This is when milk “backs up” because it is being made faster than it is removed. Bacteria from baby’s mouth and skin enter the breast through cracks or break in the skin of the nipple or through the opening to the milk duct of the nipple. This can lead to a superficial small area of inflammation (frequently from streptococcal bacteria) or a deeper walled-off infection or abscess (frequently from staphylococcal bacteria). After entry they start growing there and cause pain, swelling and redness of the affected breast. It is more common within six weeks after the delivery. Hormonal changes in the body can cause the milk ducts to become clogged with dead skin cells and debris. These clogged ducts make the breast more prone to bacterial infection. This type of infection tends to come back after treatment with antibiotics.

Other causes of mastitis include:

- complications during delivery and
- inability to breastfeed the baby soon after birth,
- engorgement that doesn’t return to normal,
- feeding to a strict routine,
- high level of maternal stress or fatigue or even trauma to the breast, which all can cause milk stasis leading to mastitis. Also, the chances of getting mastitis increase if women use only one position to breastfeed or wear a tight-fitting bra, which may restrict milk flow. Women with diabetes, chronic illness, AIDS, or an impaired immune system may be more susceptible to the development of mastitis and breast pain.

Sign and symptoms

Infection: Breast infections may cause pain, redness, and warmth of the breast along with the following symptoms:
• Inflammation or swelling of the breast.
• Skin redness, often in a wedge-shaped pattern.
• Breast may be tender and warm to touch.
• Pain or a burning sensation continuously or while breastfeeding.
• Body aches
• General malaise or ill feeling
• Fatigue
• Breast engorgement
• Fever and chills (101°F or higher in acute mastitis)
• Rigor or shaking.

**Abscess:** Sometimes a breast abscess can complicate mastitis. Harmless, noncancerous masses such as abscesses or more often tender and frequently feel mobile beneath the skin. The edge of the mass is usually regular and well defined. Indications that this more serious infection has occurred include the following:

- Tender lump in the breast that does not get smaller after breastfeeding a newborn.
- Mass may be moveable and/or compressible.
- Pus draining from the nipple.
- Persistent fever and no improvement of symptoms within 48–72 hours of the treatment.

**1.5.3 Diagnosis and Management**

The diagnosis of mastitis and breast abscess can usually be made based on a physical examination, taking into account signs and symptoms of fever, chills and the painful area in the breast. If it is unclear whether a mass is due to a fluid-filled abscess or to a solid mass such as a tumor, a test such as an ultrasound may be done. Cultures may be taken, either of breast milk or of material aspirated (taken out through a syringe) from an abscess, to determine the type of organism causing the infection. Non-breastfeeding women with mastitis, or those who do not respond to treatment, may require a mammogram or breast biopsy. This is a precautionary measure because a type of breast cancer can produce symptoms of mastitis.

**Management:** Let us now go through management for mastitis which includes medication, surgery and nursing care.

**A. Medications**

- **Pain medication:** Administer acetaminophen (such as Tylenol) or ibuprofen (such as Advil) for pain. These medicines are safe while breastfeeding and will not harm breastfeeding baby.

- **Antibiotic therapy:** Treating mastitis usually requires a 10 to 14 days course of antibiotics. For simple mastitis without an abscess, oral antibiotics are prescribed. Cephalexin (keflex) and Dicloxacillin (dycill) are two of the most common antibiotics chosen, but a number of others are available. Erythromycin may be used if a women is allergic to the commonly used antibiotics. Chronic mastitis in non-breastfeeding women can be complicated.
Recurrent episodes of mastitis are common. Occasionally, this type of infection responds poorly to antibiotics. Therefore, close follow-up with doctor is mandatory. If the infection worsens in spite of the oral antibiotics or if the patients have a deep abscess requiring surgical treatment, may be admitted to the hospital for IV antibiotics.

B. Surgery

If an abscess is present, it must be drained. After injection of local anaesthetic, the doctor may drain an abscess near the surface of the skin either by aspiration with a needle and syringe or by using a small incision. If the abscess is deep in the breast, however may require surgical drainage in the operating room. This procedure is usually done under general anaesthesia to minimise the pain and completely drain the abscess. Antibiotics and heat on the area are also used to treat abscess.

C. Nursing Management

Advice mother for the following measures:

- Encourage frequent breastfeedings;
- Do not stop breastfeeding from the affected breast, even though it will be painful. Frequently emptying of the breast prevents engorgement and clogged ducts that can only make mastitis worse.
- Apply a warm compress to the breast before and after feeding can often provide some relief. A warm bath may work as well. If heat is ineffective, ice packs applied after feedings may provide some comfort and relief.
- Avoid using ice packs just before breastfeeding because it can slow down milk flow.
- Encourage to take a mild pain reliever, such as acetaminophen (Tylenol, others) or ibuprofen (Advil, Motrin, others) for to reduce pain and inflammation if necessary.
- Encourage the patient to drink plenty of water – atleast 10 glasses a day.
- Eat well balanced meals and add 500 extra calories a day while breastfeeding. Dehydration and poor nutrition can decrease milk supply and make feel worse.
- If pus is draining from infected breast, instruct the patient to wash the nipple gently and let it air dry before putting bra back on.

Referral and follow up – When a patient with mastitis does not get any relief from the measures mentioned above you should do the following:

1) On no relief of symptoms you should refer the case for further management.

2) Medication should be given as per the protocols.

3) If no relief from symptoms, you should refer the case to next higher medical facility nearby.

4) You should follow up the cases who have to be referred/transferred to higher medical authority and know her present condition.

Prevention of Mastitis

- Breastfeeding should be given equally from both breasts.
- Empty breast completely to prevent engorgement and blocked ducts.
- Use good breastfeeding techniques to prevent sore, cracked nipples.
- Avoid dehydration by drinking plenty of fluids.
- Maintain breastfeeding routine and use varied positions to breast-feed.
- Wear a supportive bra.
- Get a much rest as possible.
- Apply warm compress to the breast or take a warm shower before breast-feeding.
- Practice careful hygiene: Hand washing, cleaning the nipples, keeping baby clean, will prevent mastitis and breast pain.

### 1.6 BREAST LUMP

Let us now learn another important condition i.e. breast lump in details.

Fibrocystic breasts are characterised by plumpiness and usually discomfort on one or both breasts. Fibrocystic breast disease (FBD), now referred to as fibrocystic changes, cystic mastitis or fibrocystic breast condition, is the most common cause of “lumpy breasts” in women and affects more than 60% of women.

Fibrocystic changes occur during ovulation and just before menstruation. During these times, hormone level changes often cause the breast cells to retain fluid and develop into nodules or cysts, which feel like a lump when touched. The nodules or cysts can spread throughout the breast, may be located in one general area or simply appear as one or more large cysts. If the lump is not filled with fluid, it is called a fibroadenoma. A fibroadenoma is a solitary, firm distinct lump, composed of a mass or lump of fibrous tissue.

Fibrocystic breast disease is the most common benign lesion. It is generally observed between 20–50 years of age.

The etiology is not known. It may be due to altered estrogen: progesterone ratio or relative decrease in progesterone or else, the breast tissues are more sensitive to Prolactin. Stress factor may at times be related.

Histologically a fibrocystic mass is characterised by adenosis, fibrosis, ductal epithelial proliferation and papillomatosis. Two types are observed: localised and diffuse. Vast majority (70%) are non-proliferative lesions. Of the proliferative lesions only few (4%) present with cellular atypia where the risk of breast cancer is high (five-fold). Risk factors are nulliparity and delayed menopause.

The patients are usually premenopausal. The patient complains of the breast pain present throughout the cycle but aggravated premenstrually (cyclic). The pain is either dull continuous or intermittent and severe.

Examination reveals effect on both the breasts; one side more than the other. On palpation, coarsely nodular areas resembling ill-defined lumps either localised or diffused, is felt. These are prominent in premenstrual phase.

The patients become anxious of malignancy and the physicians too are confused to negate it. Careful palpation, mammography, ultrasound and aspiration biopsy is helpful to exclude malignancy.
1.6.1 Causes, Risk Factors and Sign and Symptoms

The cause of breast lump is not known, but the symptoms and signs are linked to the women’s hormone patterns. The most significant contributing factor to fibrocystic breast condition is a normal hormonal variation during monthly cycle. Many hormonal changes occur as a women’s body prepares each month for a possible pregnancy. The most important of these hormones are estrogen and progesterone. These two hormones directly affect the breast tissues but causing cells to grow and multiply. As hormone levels rise just before menstruation and mammary blood vessels swell, ducts and alveoli expand, and cell growth proliferates. Breast tissue retains fluid and grows larger. After menstruation, these process reverse.

A diet high in fat and excessive caffeine intake is considered to make the condition worse and heredity plays an important role in causing breast lumps.

Sign and symptoms

The common symptoms of breast lump are:

- Tenderness in one or both breast with pressure on touch
- Breast pain or discomfort
- Breast may feel swollen
- An intermittent or persistent sense of breast engorgement, associated with dull, heavy pain and tenderness
- Intermittent appearance of cysts or lump that form and then resolve within a few weeks
- A dense, pebbly consistency to breast tissue
- Formation of persistent cyst or lumps
- Nipple discharge or inflammation.

These symptoms can range from mild to severe. Many women notice monthly cyclic patterns, with symptoms most severe just before each menstrual period.

1.6.2 Diagnosis, Management and Treatment

Breast lump is usually diagnosed on routine checkup or when tenderness or a lump that was probably discovered during breast self-examination. The doctor will examine the breast and sometimes recommend a mammogram, an ultrasound exam and (rarely) a needle aspiration.

Management

There are no specific treatments for breast lump, other than those to minimise discomfort. Doctors may recommend the following:

1) Relief of symptoms: Adequate support of the breasts and perhaps wearing a bra at night, may provide relief from many of the symptoms of fibrocystic breast condition. Anti-inflammatory medications, including acetaminophen, and nonsteroidal anti-inflammatory medications (NSAIDs) often reduce the breast pain significantly.

   Avoid caffeine and chocolate, eliminate excessive dietary fat and limit salt intake and increase dose of vitamin. There are reports suggesting that a variety
of vitamins may be of benefit in relieving the symptoms of fibrocystic breast condition. These have included vitamin C, vitamin E, vitamin B6 and vitamin A, among others.

2) **Hormonal therapy:** Birth control pills regulate estrogen and progesterone levels. Danocrine, a synthetic version of the male hormones testosterone, works by shutting down the menstrual cycle. Bromocriptine reduces prolactin release and suppresses breast milk production after pregnancy, will reduce the breast lump.

**Be sure to:** Educate women to:

1) Perform monthly breast self-exams.
2) Have a yearly breast exam by a doctor.
3) Have regular mammograms when recommended by your health care provider.
4) See the doctor whenever new lumps appear, if an existing lump changes in any way, or if unexplained symptoms develop.

**Treatment**

- Assurance and re-examination at intervals.
- To wear a well fitting brassiere day and night.
- Acetaminophen or NSAIDs may be helpful.
- To reduce the intake of methylxanthines (coffee, tea, chocolates, caffeinated soda) and tobacco.
- Vitamin E 400 mg daily may be helpful.
- In refractory (not responding) cases, any of the following may be tried:
  - Cyclic combined estrogen-progesterone preparations.
  - Danazol 200 mg daily in divided doses.
  - Bromocriptine-2.5–5 mg daily at bed time.
  - Surgery- rarely indicated.

**Nursing Management**

This includes relief of symptoms by use of anti-inflammatory medication, proper fitting brassiere, vitamin supplement, reduce intake of coffee, tea and tobacco. In case of no relief, you should:

1) Refer the case to higher facilities for further management.
2) Give medication as prescribed as per protocol.
3) Follow up the case which were referred for their present condition.

<table>
<thead>
<tr>
<th>Check Your Progress 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Define Vaginal Discharge.</td>
</tr>
<tr>
<td>................................................................................................................</td>
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<tr>
<td>.............................................................................................................</td>
</tr>
</tbody>
</table>
2) Explain preventative measures for abnormal vaginal discharge.

3) List signs and symptoms of mastitis.

4) Describe nursing management for mastitis.

5) List common signs and symptoms for breast lump.

1.7 PELVIC PAIN

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Pelvic pain is a common symptom in gynecology. It may be present in acute form or in chronic form. It should be remembered that the pain is just a symptom of an underlying disorder. Whereas, it is often easy to find out the underlying cause of acute pain, it is often difficult to find out the cause of chronic pelvic pain. Sensation of pain is found to depend on many factors in an individual: e.g. subjective feel. Emotional status, genetic factors, experience, gender, pain threshold, anxiety and expectations. Women have lower pain threshold and tolerance. Assess the type of pain, reassure the clients and educate about management of pain.

Educate the women about the site and cause of pain to help in assessment. Impulse generated due to depolarisation of a peripheral nerve ending (transduction)? transmission of the nerve impulse? Modulation (control of impulse transmission to neurons by neurotransmitters)? For perception of pain refer Table 1.2 localisation of referred pain.

<table>
<thead>
<tr>
<th>Organs</th>
<th>Site for Referred Pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body of uterus</td>
<td>Hypogastrium, anterior and medial aspect of thighs</td>
</tr>
<tr>
<td>Fallopian tubes and ovaries</td>
<td>Above the mid- inguinal point</td>
</tr>
<tr>
<td>Cervix</td>
<td>Upper sacral region</td>
</tr>
<tr>
<td>Uterosacral ligament</td>
<td>Lower sacral region</td>
</tr>
</tbody>
</table>

Unlike somatic structures, which are well represented in the cerebral cortex in terms of localisation, visceral structures are poorly localised in the cerebral cortex. Thus, the pain arising from the pelvic organs is often localised not to the organ but referred to the skin area supplied by the same spinal nerve. Various neuromodulators (prostaglandins, endorphins) and neurotransmitters
(norepinephrine, serotonin) are involved to modify the pain sensation in the brain. Visceral pain may be due to distention, stretching, hypoxia, necrosis, chemical irritants or inflammation of the viscera. Pelvic pain may be direct or referred.

1.7.1 Acute Pelvic Pain

Acute pain is of the short duration and generally the symptoms are proportionate to the extent of tissue damage. In chronic pelvic pain, the onset is insidious and the degree of pain is not proportionate to the extent of structural tissue damage.

Most often, the basic mechanism of acute pain is due to irritation of the peritoneum by either blood or infection. The cause of the acute pelvic pain are appendicitis, ectopic pregnancy, endometriosis, ovarian cyst, ovarian torsion.

Assessment: A meticulous history taking and examination – systemic, abdominal and pelvic, most often help in diagnosis of pelvic pain.

Guidelines in clinical assessment:

- Pain of gynecologic origin usually starts in the lower abdomen and then spreads to the entire abdomen. It is usually aggravated during menstruation.
- Pain preceded by amenorrhoea is usually obstetrically related-disturbed ectopic pregnancy should be kept in mind.
- Anorexia, nausea and vomiting are usually correlated well with gastrointestinal problems.
- Frequency of micturition, dysuria with or without fever point to the diagnosis of urinary tract infection.
- Fever with chills and rigour is most often associated with acute PID.
- Pain with syncopal attacks with collapse suggests intraperitoneal haemorrhage.
- Abdominopelvic lump along with more or less stable vital signs points towards complicated pelvic tumor.

Investigations

Basic investigations to substantiate the clinical diagnosis as when indicated include:

Blood: Complete haemogram is done. An increase in white cell count may indicate infection. Decreased haemoglobin level with low haematocrit value indicates hypovolemia.

Midstream urine: for microscopic examination and culture is to be done to diagnose UTI. Presence of pus cells, bacteria and red blood cells suggests UTI. Urine for immunological test of pregnancy, ultrasonography to rule out ectopic pregnancy.

With these protocols, diagnosis is established in majority and for those remaining undiagnosed cases; the following are to be employed.

X-ray abdomen: (upright, supine and lateral decubitus film) is to be done to diagnose-intestinal obstruction or perforation. Perforation of air-filled viscous is evident by presence of free air under the diaphragm. Free fluid suggests ruptured cyst. Calculus can be evident from X-ray.
Sonography (transvaginal) is helpful to detect pelvic mass or pregnancy-uterine or tubal.

### 1.7.2 Chronic Pelvic Pain

Chronic pelvic pain (CPP) is defined as the noncyclic pain (non-menstrual) of 6 month duration or more localised to the pelvis, anterior abdominal wall below the pelvis or lower back, severe enough to cause functional disability that require medical or surgical treatment.

**Assessment:** While it is comparatively easy to diagnose the cyclic chronic pelvic pain, it is difficult at times to pinpoint the diagnosis of acyclic and non-gynaecologic group. However, meticulous history taking and through clinical examinations- abdominal and vaginal with the possibility in mind, helpful in diagnosis.

#### Table 1.3: Causes of Chronic Pelvic Pain

<table>
<thead>
<tr>
<th>Gastrointestinal</th>
<th>• irritable bowel syndrome</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• appendicitis</td>
</tr>
<tr>
<td></td>
<td>• constipation</td>
</tr>
<tr>
<td></td>
<td>• diverticulitis</td>
</tr>
<tr>
<td>Urological</td>
<td>• interstitial cystitis</td>
</tr>
<tr>
<td></td>
<td>• urethral syndrome</td>
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<tr>
<td></td>
<td>• calculi</td>
</tr>
<tr>
<td>Orthopaedic</td>
<td>Disease of the bones, ligaments, muscles of the lumbosacral region</td>
</tr>
<tr>
<td>Neurological</td>
<td>Nerve compression</td>
</tr>
<tr>
<td>Hernias</td>
<td>Inguinal, femoral</td>
</tr>
<tr>
<td>Gynaecological</td>
<td>PID, Endometriosis, Adenomyosis</td>
</tr>
</tbody>
</table>

**Treatment:**

**Principles:** Guide patients for treatment:

- To have a definite diagnosis of the underlying disorders.
- To establish the relationship between the pathology and the symptoms.
- To evaluate psychosomatic factors-cases or effect.
- Multidisciplinary approach involving a psychologist is ideal especially when no pathology could be detected.

In detectable pathology: conservative or radical surgery is to be done to remove the offending pathology. Hysterectomy is ideal for women with pelvic endometriosis or adenomyosis, when she has complete child bearing. Discuss with the patients the suitable treatment and refers to appropriate doctor.

**Medical Management of Pain**

- Assurance and sympathetic handling often help to reduce the pain.
- **NSAIDs:** Ibuprofen, Naproxen: COX_2 inhibitors – Celecoxib, Ketrorolac.
• Neurolytic agents: Tricyclic antidepressants- Amitriptyline line, Imipramine, Serotonin uptake inhibitors: Sertraline, Fluoxetine, Paroxetine, ion channel Blockers: Gabapentin, Carbamazepine.

• Narcotics (under supervision): Codeine, Methadone.

• Others: OC pills, progestogens, Danazol or even GnRH analogues are indicated in young patients with minimal endometriosis, spasmodic dysmenorrhoea or midmenstrual pain.

• Minimal invasive surgery includes laser therapy in pelvic endometriosis or laparoscopic adhesiolysis. Laparoscopic presacral neurectomy (PSN) and uterine nerve ablation (LUNA) are considered for midline dysmenorrhoea when conservative management has failed.

• Surgery like ventrosuspension, placation of round ligaments in deep dyspareunia or even presacral neurectomy may be employed.

• Hysterectomy should be contemplated judiciously in selected cases.

• Intractable pain of malignant origin: Apart from narcotic analgesics, symptomatic treatment, reassurance may relieve pain for few months, refer well in time to territory care hospital for further treatment.

Nursing Management

When you find that the patient has no relief of pelvic pain inspite of following the medical management, you should

1) Plan to refer the case for further management.

2) Give medication as per protocol.

3) Refer the case to next higher medical facility nearby.

4) Follow up the cases that are referred to know their present condition.

1.8 PELVIC ORGAN PROLAPSE (POP)

Pelvic organ prolapse (POP) is one of the common clinical conditions met in day-to-day gynaecological practice especially among the parous women.

The uterus is normally placed in anteverted and anteflexed position. It lies in between the bladder and rectum. The cervix pierces the anterior vaginal wall almost at right angle to the axis of the vagina.

1.8.1 Etiology of Pelvic Organ Prolapse

There are predisposing factors to explain causes of POP.

Predisposing factors

a) Acquired – trauma of vaginal delivery causing injury to:

1) Ligaments

2) Endopelvic Fascia

3) Levator Muscle

4) Nerve and muscle damage due to repeated child birth
b) **Congenital**

1) Inborn weakness of supporting structures  
2) Postmenopausal atrophy  
3) With-age  
4) Increased intra-abdominal pressure due to constipation  
5) Weight lifting  
6) Undernutrition  
7) Obesity  
8) Fibroids  
9) Weakness (pelvic floor)  
10) Genetic weakness of supporting structure

**Table 1.4: Causes of Pelvic Organ Prolapse (POP)**

<table>
<thead>
<tr>
<th>Anatomical Factors</th>
<th>Clinical Factors</th>
<th>Aggravating Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Predisposing Factors</strong></td>
<td><strong>A. Acquired</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trauma of vaginal delivery causing injury (tear or break)</td>
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<tr>
<td></td>
<td></td>
<td>to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Ligaments</td>
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<tr>
<td></td>
<td></td>
<td>2. Endopelvic fascia</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Levator muscle (myopathy)</td>
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<tr>
<td></td>
<td></td>
<td>4. Perineal body</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Nerve (pudendal) and muscle damage due to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>repeated child birth</td>
</tr>
<tr>
<td></td>
<td><strong>B. Congenital</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inborn weakness of supporting structures</td>
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<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>• Postmenopausal atrophy</td>
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<tr>
<td></td>
<td></td>
<td>• Poor collagen tissue repair with age</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased intra-abdominal pressure as in chronic lung</td>
</tr>
<tr>
<td></td>
<td></td>
<td>disease and constipation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Occupation (weight lifting)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Asthenia and undernutrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Obesity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased weight of the uterus as in fibroid or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>myohyperplasia</td>
</tr>
</tbody>
</table>

**1.8.2 Types of Pelvic Organ Prolapse**

The genital prolapse is broadly grouped into:

- Vaginal prolapse  
- Uterine prolapse

While vaginal prolapse can occur independently without uterine descent, the uterine prolapse is usually associated with variable degrees of the vaginal descent.
### Types of Genital Prolapse

#### A Vaginal Prolapse

1) Anterior wall
- Cystocele (upper 2/3)
- Urethrocele (lower 1/3)
- Cystourethrocele (combined)

2) Posterior wall
- Relaxed perineum
- Rectocele

3) Vault prolapse
- Enterocele
- Secondary
  - Abdominal hysterectomy
  - Vaginal hysterectomy

Let us discuss these types one by one:

**A) Vaginal Prolapse**

1) **Anterior Wall consist of following**
   - **Cystocele**- The cystocele is formed by laxity and descent of the upper two-third of the anterior vaginal wall. As the bladder base is closely related to this area, there is herniation of the bladder through the lax anterior wall.
   - **Urethrocele**- When there is laxity of the lower-third of the anterior vaginal wall, the urethra herniates through it. This may appear independently or usually along with cystocele and is called cystourethrocele.

2) **Posterior Wall**
   - **Relaxed perineum** - Torn perineal body produces gaping with bulge of the lower part of the posterior vaginal wall.
   - **Rectocele** - There is laxity of the middle-third of the post vaginal wall and adjacent recto-vaginal septum. As a result, there is herniation of the rectum through the lax area.

3) **Vault Prolapse**
   - **Enterocele** – laxity of the upper-third of the posterior vaginal wall results in herniation of the pouch of Douglas. It may contain omentum or even loop of small bowel and hence, called enterocele. Traction enterocele is secondary to uterovaginal prolapse. Pulsion enterocele is secondary to chronically raised intra-abdominal pressure.
   - **Secondary vault prolapse** – This may occur following either vaginal or abdominal hysterectomy. Undetected enterocele during initial operation or inadequate primary repair usually results in secondary vault prolapse.
Reproductive Health and Adolescence Health

B. Uterine Prolapse

There are two types:

1) **Uterovaginal prolapse** is the prolapse of the uterus, cervix and upper vagina.

   This is the commonest type. Cystocele occurs first followed by traction effect on the cervix causing retroversion of the uterus. Intra-abdominal pressure has got piston like action on the uterus thereby pushing it down into the vagina.

2) **Congenital**

   There is usually no cystocele. The uterus comes down along with inverted upper vagina. This is often met in nulliparous women and hence called nulliparous prolapse. The cause is congenital weakness of the supporting structures holding the uterus in position.

**Degree of Uterine Prolapse**: There are three degree of prolapse.

Three degrees are described as:

- **First degree**: The uterus descends from its anatomical position (external os at the level of ischial spines) but the external os still remains inside the vagina.

- **Second Degree**: The external os protrudes outside the vaginal introitus but the uterine body still remains inside the vagina.

- **Third degree**: (syn: Procidentia, complete prolapse)- The uterine cervix and body descends to lie outside the introitus.

Procidentia involves prolapse of the uterus with eversion of the entire vagina.

**Symptoms**: Identify the symptoms of prolapse like:

- Feeling of something coming down vagina, especially while she is moving about.
- There may be variable discomfort on walking when the mass comes outside.
- Backache or dragging pain in the pelvis.

The above two symptoms are usually relieved on lying down.

- Dyspareunia

**Urinary symptoms (in presence of cystocele) include following:**

- Difficulty in passing urine, more the strenuous effort, the less effective is the evacuation. The patient has to elevate the anterior vaginal wall for evacuation of the bladder.
- Incomplete evacuation may lead to frequent desire to pass urine.
- Urgency and frequency of micturition may also be due to cystitis.
- Painful micturition is due to infection.
- Stress incontinence is usually due to associate urethrocele.
- Retention of urine may rarely occur.

**Bowel symptoms (in presence of rectocele) include following:**

Difficulty in passing stool. The patient has to push back the posterior vaginal wall in position to complete the evacuation of faeces. Faecal incontinence may be associated.
Excessive white or blood-stained discharge per vaginum is due to associated vaginitis or decubitus ulcer.

### 1.8.3 Clinical Examination and Diagnosis of POP

Assist the doctor in diagnosis of POP as follows:

- A composite examination – inspection and palpation. Vaginal, rectal, rectovaginal or even under anaesthesia may be required to arrive at the correct diagnosis.
- General examination – details, including BMI signs of myopathy or neuropathy, features of chronic airway disease or any abdominal mass should be done.
- Pelvic organ prolapse (POP) is evaluated by pelvic examination in both dorsal and standing positions. The patient is asked to strain as to perform a Valsalva maneuver during examination. This often helps to demonstrate a prolapse which may not be seen at rest.
- A negative finding on inspection in dorsal position should be reconfirmed by asking the patient to strain on squatting position.
- Prolapse in one organ (uterus) is usually associated with prolapse of the adjacent organs (bladder, rectum).
- Etiological aspect of prolapse should be evaluated.

**Cystocele:** There is bulge of varying degree of the anterior vaginal wall, which increases when the patient is asked to strain. This may be seen on inspection. In others, to elicit this, one may have to separate the labia or depress the posterior vaginal wall with fingers or using Sims’ speculum, placing the patient in lateral position.

**The mucosa over the bulge has got transverse rugosities.** The bulge has got impulse on coughing, with diffuse margins and is reducible.

**Cystourethrocele:** The bulging of the anterior vaginal wall involves the lower-third also. One may find the urine to escape out through the urethral meatus when the patient is asked to cough-stress incontinence. To elicit the test, the bladder should be full.

**Relaxed perineum:** There is gaping introitus with old scar of incomplete perineal tear. The lower part of the posterior vaginal wall is visible with or without straining.

**Rectocele and anterocele:** When two conditions exist together, there is bulging of the posterior vaginal wall with a transverse sulcus between the two. The midvaginal one being rectocele with diffuse margins and reducible. This is visualised by retracting the anterior vaginal wall by London’s retractor. Ultimate differentiation of the two entities is by rectal or rectovaginal examination. In enterocele, the bulging is close to the cervix and cannot be reached by the finger inside the rectum.

**Uterine Prolapse:** In second or third degree of prolapse, infection can relieve a mass protruding out through the introitus, the leading part of which is the external. In first degree of uterine descent, the diagnosis is made through speculum examination when one finds the cervical descent below the level of ischial spines on staining. In others, however, the external os is visible on separating the labia.
Palpation is essential to diagnose a third degree prolapse; the entire uterus comes below the introitus.

There may be evidences of decubitus ulceration and dark pigmented areas.

**Differential Diagnosis**

**Cystocele:** The Cystocele is often confused with a cyst in the anterior vaginal wall.

**Management of Prolapse**

- Preventive
- Conservative
- Surgery

**Preventive**

The following guidelines may be prescribed to prevent or minimise genital prolapse.

**Adequate Antenatal and Intranatal Care:** Provide adequate perineal support.

To avoid injury to the supporting structures during the time of vaginal delivery either spontaneous or instrumental.

- Check type of injury, inspect meticulously
- Check if episiotomy is required
- If it is required to prevent tear, then give episiotomy under aseptic precautions
- Suture episiotomy in layers
- Ensure to control bleeding
- If there is a tear, they are usually lacerated, approximate and stich the tear to avoid complication later.

**Adequate postnatal Care**

- Encourage early ambulation
- Encourage pelvic floor exercise by squeezing the pelvic floor muscles in the puerperium.

**General Measures**

- To avoid strenuous activities, chronic cough, constipation and heavy weight lifting.
- To avoid future pregnancy too soon and too many by contraceptive practice.

**Conservative**

**Indications of Conservative Management are:**

- Asymptomatic women.
- Mild degree prolapses.
- POP in early pregnancy.
Meanwhile, following measures may be taken:

- Improvement of general measures.
- Estrogen replacement therapy may improve minor degree prolapse in postmenopausal women.
- Pelvic floor exercises is an attempt to strengthen the muscles.
- Pessary treatment.

**Pessary Treatment**

It should be emphasised that the pessary cannot cure prolapse but relieves the symptoms by stretching the hiatus urogenitalis, thus preventing vaginal and uterine descent. Indications of use are:

- Early pregnancy- The pessary should be placed inside up to 18 weeks when the uterus becomes sufficiently enlarged to sit on the brim of the pelvis.
- Puerperium- To facilitate involution.
- Patients absolutely unfit for surgery especially with short life expectancy.
- Patient’s unwillingness for operation.
- While waiting for operation.
- Additional benefits: Improvement of urinary symptoms (voiding problems, urgency).

**Surgical Treatment**

Educate and refer for surgical treatment:

- Surgery is the treatment of symptomatic prolapse where conservative management has failed or is not indicated.
- Surgical procedures may be:
  - Restorative-(1) correcting her own support tissues (2) compensatory-using permanent graft material.
  - Extirpative-removing the uterus and correcting the support tissues.
  - Obliterative- closing the vagina.
- Meticulous examination, even under anaesthesia, is necessary to establish the correct diagnosis of the organ prolapsed so that effective and appropriate repair can be carried out.
- There is no single procedure for all types of prolapse. Factors determining the choice of surgery are: patient’s age; parity, degree of prolapse, any prior surgery for prolapse, type of prolapse (Cystocele, enterocoele) and associated factors (urinary/fecal incontinence, PID), any associated comorbid condition (cardiac disease).

**Check Your Progress 3**

1) List the investigation required to diagnose acute pelvic pain.

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1.9 LET US SUM UP

You have learnt common gynaecological conditions, their pathophysiology, causes and risk factors, signs and symptoms, diagnostic procedures and management. Nursing management becomes easy when you know the background of the patient, your interaction with the woman suffering from these conditions would definitely help them with your appropriate advices which are explained after each condition. Hence, recall from your previous experience of dealing such conditions in clinical set up and utilise this knowledge in the community as and when patient is in need.

1.10 MODEL ANSWERS

Check Your Progress 1

1) The main symptoms of dysmenorrhoea are:
   - pain concentrated in the lower abdomen
   - in the umbilical region or
   - the suprapubic region of the abdomen.
   - right or left abdomen.
   - may radiate to the thighs and lower back.

2) **Laboratory studies:** The investigations to be performed should be chosen based on clinical diagnosis.
   - complete blood count (with differential), for evidence of infection or neoplastic process
   - urinalysis, to exclude urinary tract infection
   - quantitative human chorionic gonadotropin level, to exclude ectopic pregnancy, gonococcal/chlamydial cultures
   - enzyme immunoassay (EIA), and DNA probe testing, to exclude sexually transmitted infections (STIs)/pelvic inflammatory disease (PID)
   - stool guaiac, to rule out GI bleeding and
   - erythrocyte sedimentation rate (ESR), for subacute salpingitis.
3) Premenstrual syndrome (PMS) or premenstrual tension (PMT) is a combination of physical, psychological, emotional and mood disturbances that occur after a woman’s ovulation and typically ending with the onset of her menstrual flow.

The most common mood-related symptoms are irritability, depression, crying, oversensitivity, and mood swings with alternating sadness and anger. The most common physical symptoms are fatigue, bloating, breast tenderness (mastalgia), acne, and appetite changes with food cravings.

4) Prevention: Preventive measures are usually lifestyle changes required to be taken as follows:

- Engage in the least 30 minutes of brisk walking, cycling, swimming or other aerobic activity during most days of the week. Regular daily exercise can help improve your overall health and alleviate symptoms such as fatigue and depresses mood.
- Learn and use stress management techniques such as progressive muscle relaxation, deep breathing, and meditation, a warm bath, listening to music, or yoga in day.
- Eat smaller, more frequent meals to reduce bloating and the sensation of the fullness.
- Limit salt and salty food to reduce bloating and fluid retention.
- Choose foods high in complex carbohydrates, such as fruits, vegetables and whole grains.
- Choose food rich in calcium. If you cannot tolerate dairy products or aren’t getting adequate calcium in your diet, you may need a daily calcium supplement.
- Limit caffeine and alcohol. Caffeine can make breast tenderness worse and increase headaches.

Check Your Progress 2

1) Vaginal discharge refers to secretions from the vagina and such discharge can vary in:

   Consistency (thick, pasty, thin), colour (clear, cloudy, white, yellow, green) and smell (normal, odourless, bad odour).

2) Many factors can play a role in the occurrence of vaginal infections and discharge. You should advice for practicing these simple tips which significantly may reduces risk of getting a vaginal infection: These are as given below:

   a) Always wear cotton panties. Cotton allows genital area to breathe. Helping it stay dry. It’s also a good idea to wear panties only during the day and not a night when you are sleeping.
   b) Don’t use vaginal douches.
   c) Never use petroleum jelly or oils for vaginal lubrication. This can create a breeding ground for bacteria to grow.
   d) If you are being treated for a vaginal infection, use all the medication as directed, even you think you are better.
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e) Don’t have sexual intercourse during treatment for a vaginal infection. Wait until you have no more symptoms.

f) Avoid vaginal contact with products that can irritate the vagina, such as feminine hygiene products, perfumed or deodorant soaps, powders, lotions, and bubble baths.

g) Avoid wearing tight-fitting clothing’s, such as bathing suits, exercise wear, pantyhose for prolonged periods of time.

h) Many times, vaginal infections cause intense itching- don’t scratch scratching infected, inflamed areas will only make things worse.

i) If patients are self-treating a vaginal infection and symptoms have not improved after treatment, see health care providers, for a vaginal exam. Don’t use any vaginal products or treatments for 48 hours before appointment.

j) Always use condoms during sexual intercourse unless patient is in a long-term monogamous relationship.

k) Always wipe from front to back after urination or having a bowel movement. Improper wiping easily spreads bacteria to the vagina and may lead may to vaginal discharge and infection.

Of course, good hygiene, getting plenty of sleep, and a well-rounded diet with an appropriate fluid intake are always a good idea for vaginal health, as well as for overall health and well-being.

3) Mastitis

Breast infections Mastitis may cause pain, redness, and warmth of the breast along with the following symptoms:

- Inflammation or swelling of the breast.
- Skin redness, often in a wedge-shaped pattern.
- Breast may be tender and warm to touch.
- Pain or a burning sensation continuously or while breastfeeding.
- Body aches
- General malaise or ill feeling
- Fatigue
- Breast engorgement
- Fever and chills (101°F or higher in acute mastitis)
- Rigour or shaking

Abscess: Sometimes a breast abscess can complicate mastitis. Harmless, noncancerous masses such as abscesses or more often tender and frequently feel mobile beneath the skin. The edge of the mass is usually regular and well defined. Indications that this more serious infection has occurred include the following:

Tender lump in the breast that does not get smaller after breastfeeding a newborn Mass may be moveable and/or compressible.

Pus draining from the nipple.

Persistent fever and no improvement of symptoms within 48–72 hours of the treatment.
4) **Nursing Management**

Advice mother for the following measures:

- Encourage frequent breastfeedings;
- Do not stop breastfeeding from the affected breast, even though it will be painful. Frequently emptying of the breast prevents engorgement and clogged ducts that can only make mastitis worse.
- Apply a warm compress to the breast before and after feeding can often provide some relief.
- A warm bath may work as well. If heat is ineffective, ice packs applied after feedings may provide some comfort and relief. Avoid using ice packs just before breastfeeding because it can slow down milk flow.
- Encourage to take a mild pain reliever, such as acetaminophen (Tylenol, others) or ibuprofen (Advil, Motrin, others) for to reduce pain and inflammation if necessary.
- Encourage the patient to drink plenty of water—at least 10 glasses a day.
- Eat well balanced meals and add 500 extra calories a day while breastfeeding. Dehydration and poor nutrition can decrease milk supply and make feel worse.

If pus is draining from infected breast, instruct the patient to wash the nipple gently and let it air dry before putting bra back on.

5) The common symptoms of breast lump are:

- Tenderness in one or both breast with pressure on touch.
- Breast pain or discomfort
- Breast may feel swollen
- An intermittent or persistent sense of breast engorgement, associated with dull, heavy pain and tenderness.
- Intermittent appearance of cysts or lump that form and then resolve within a few weeks.
- A dense, pebbly consistency to breast tissue
- Formation of persistent cyst or lumps
- Nipple discharge or inflammation

These symptoms can range from mild to severe. Many women notice monthly cyclic patterns, with symptoms most severe just before each menstrual period.

**Check Your Progress 3**

1) Basic investigations to substantiate the clinical diagnosis as when indicated include:

- **Blood:** Complete haemogram is done. An increase in white cell count may indicate infection. Decreased haemoglobin level with low haematocrit value indicates hypovolemia.

Midstream urine for microscopic examination and culture is to be done to diagnose UTI. Presence of pus cells, bacteria and red blood cells suggests UTI.

Urine for immunological test of pregnancy, ultrasonography to rule out ectopic pregnancy.
With these protocols, diagnosis is established in majority and for those remaining undiagnosed cases; the following are to be employed.

**X-ray abdomen**- (upright, supine and lateral decubitus film) is to be done to diagnose-intestinal obstruction or perforation. Perforation of air-filled viscous is evident by presence of free air under the diaphragm. Free fluid suggests ruptured cyst. Calculus can be evident from X-ray.

**Sonography (transvaginal)** is helpful to detect pelvic mass or pregnancy-uterine or tubal.

2) **Causes of Chronic Pelvic Pain**

| Gastrointestinal          | • irritable bowel syndrome  
|                           | • appendicitis              
|                           | • constipation              
|                           | • diverticulitis            |

| Urological                | • interstitial cystitis     
|                           | • urethral syndrome         
|                           | • calculi                   |

| Orthopaedic               | Disease of the bones, ligaments, muscles of the lumbosacral region |

| Neurological              | Nerve compression           |

| Hernias                  | Inguinal, femoral           |

| Gynaecological            | PID, Endometriosis, Adenomyosis |

3. **Types of Genital Prolapse**

(A) **Vaginal**

1) Anterior wall
   - Cystocele (upper 2/3)
   - Urethrocele (lower 1/3)
   - Cystourethrocele (combined)

2) Posterior wall
   - Relaxed perineum
   - Rectocele

3) Vault prolapse
   - Enterocoele
   - Secondary following
     - Abdominal hysterectomy
     - Vaginal hysterectomy

(B) **Uterine**

1) Uterovaginal
   - 2) Congenital

4) The following guidelines may be prescribed to prevent or minimise genital prolapse.
**Adequate Antenatal and Intrapartal Care:** Provide adequate perineal support. To avoid injury to the supporting structures during the time of vaginal delivery either spontaneous or instrumental.

**Adequate Postnatal Care**
- Encourage early ambulation.
- Encourage pelvic floor exercise by squeezing the pelvic floor muscles in the puerperium.

**General Measures**
- To avoid strenuous activities, chronic cough, constipation and heavy weight lifting.
- To avoid future pregnancy too soon and too many by contraceptive practice.

### 1.11 REFERENCES


