**PUERPERIUM**

Puerperium is the period following childbirth during which the body tissues, especially the pelvic organs revert back approximately to the pre-pregnant state both anatomically and physiologically.

**DURATION OF PUERPERIUM**

Puerperium begins as soon as the placenta is expelled and **lasts for approximately 6 weeks** when the uterus becomes regressed almost to the non-pregnant size. The period is arbitrarily divided into:

* **Immediate:** Within 24 hours
* **Early:** Upto 7 days
* **Remote:** Upto 6 weeks

Similar changes occur following abortion but takes a **shorter period** for the involution to complete.

**GENERAL PHYSIOLOGICAL CHANGES DURING PUERPERIUM**

* **PULSE:** For a few hours after normal delivery, the pulse rate is likely to be raised, which settles down to normal during the **second day**. However, the pulse rate often rises with after-pain or excitement.
* **TEMPERATURE:** The temperature **should not be above 37.2°C (99°F) within the first 24 hours.** There may be slight reactionary rise following delivery by **0.5°F** but comes down to normal within **12 hours**. On the 3rd day, there may be slight rise of temperature due to **breast engorgement** which **should not** last for more than **24 hours**.
* **URINARY TRACT:** The bladder mucosa becomes edematous and hyperemic and often shows evidences of submucous extravasation of blood. The bladder capacity is increased. The bladder may be overdistended without any desire to pass urine. Dilated ureters and renal pelvis return to normal size within **8 weeks**. There is pronounced diuresis on the **2nd or 3rd day** of the puerperium.
* **GASTROINTESTINAL TRACT: Increased thirst** in early puerperium is due to loss of fluid during labor, in lochia, diuresis and perspiration. Constipation is a common problem for the following reasons: delayed gastrointestinal motility, mild ileus following delivery, together with perineal discomfort. Some women may have the problem of anal incontinence.
* **WEIGHT LOSS:** In addition to the weight loss **(5-6 kg)** as a consequence of the expulsion of the fetus, placenta, liquor and blood loss, a further loss of about **2 kg** (4.4 lb) occurs during puerperium chiefly caused by diuresis. This weight loss may continue up to **6 months** of delivery.
* **URINARY TRACT AND RENAL FUNCTION:** In relation to changes in pregnancy persistence of urinary stasis in the ureters and bladder is observed even up to **12 weeks** postpartum. Glomerular filtration returns to normal by **8 weeks** postpartum.
* **FLUID LOSS:** There is a net fluid loss of at least **2 litres** during the **1st week** and an additional **1.5 litres** during the **next 5 weeks.**

The amount of loss depends on the amount retained during pregnancy, dehydration during labor and blood loss during delivery. The loss of salt and water are larger in women with pre-eclampsia and eclampsia.

* **BLOOD VALUES:** Immediately following delivery, there is slight **decrease** of blood volume due to blood loss and dehydration. Blood volume returns to non-pregnant level by the **2nd week**. Cardiac output rises soon after delivery to about 80% above the pre-labor value but slowly returns to normal within **1 week**.
* **OVARIAN FUNCTION (MENSTRUATION AND OVULATION):** The onset of the first menstrual period following delivery is very variable and depends on lactation. If woman does not breastfeed her baby, menstruation returns by **12th week** following delivery in 80% of cases. The meantime for onset of first menstruation is **7-9 weeks.**

 In nonlactating mothers, ovulation may occur as early as **4 weeks** and in lactating mothers about **10 weeks** after delivery.

* **THYROID FUNCTION:** Thyroid volume regresses gradually to pre-pregnant state by **12 weeks**. Thyroid functions return to normal by **4 weeks** postpartum. Women on thyroid medications should get their thyroid function checked to readjust the drugs.

**PHYSIOLOGICAL CHANGES IN REPRODUCTIVE SYSTEM**

**INVOLUTION OF UTERUS:** Involution is the process whereby the genital organs revert back approximately to the state as they were before pregnancy.

 After the delivery the uterus becomes firm and retracted with alternate hardening and softening. The uterus measures about **20x12x7.5 cms**. (length, breadth and thickness) and weighs about **1000 gms.**

**Reduction of the size:**

* After labor, fundus is 5cm below the umbilicus or 12cm above the symphysis pubis.
* After 24hrs at the level of umbilicus.
* After 1 week 7.5cm above the symphysis pubis and 12 days after labor the fundus is not usually palpable.
* The placental site is 7.5cm and at the end of 6 weeks measures 1.5cm.

**LOWER UTERINE SEGMENT:** Immediately following delivery, the lower segment becomes a thin, flabby and collapsed structure. It takes a few weeks to revert back to the normal shape and size of the isthmus.

**CERVIX:** The cervix contracts slowly. The external os admits 2 fingers for a few days but by the end of 1st week, narrows down to admit the tip of a finger only. The contour of the cervix takes a longer time to regain (6weeks) and the external os never reverts back to the nulliparous state.

**OVARIES:** The ovaries are inactive during the last 2 trimesters of pregnancy, because of the drop in placental hormones level and gradually resumes the pre-pregnancy cycle.

**LOCHIA**

It is the vaginal discharge for the first **fortnight** during puerperium.

**AMOUNT:** The average amount of discharge for the first 5-6 days is estimated to be 250ml.

**TYPES OF LOCHIA**

|  |  |  |  |
| --- | --- | --- | --- |
| **CHARACTERISTICS**  | **LOCHIA RUBRA**  | **LOCHIA SEROSA**  | **LOCHIA ALBA**  |
| DAYS OF FLOW  | 1-4 days  | 5-9 days  | 10-14 days  |
| COLOR  | Red | Yellowish pink or pale brownish  | Pale white  |
| COMPONENTS  | Blood, shreds of fetal membrane, decidua, vernix caseosa, lanugo, meconeium  | Less RBC, more leukocytes, wound exudates, mucous from cervix, microorganisms  | Decidua cells, leukocytes, mucous, fatty, granular epithelial cells, microorganism, cholestrin crystals  |

**IMPORTANCE OF INSPECTING LOCHIA**

It gives information about the puerperal state of the mother. **(Pads to be inspected daily).**

* **Odour:** If offensive- Infection, retained cotton to be kept in mind.
* **Amount:** Scanty or absent- Infection.
* **Colour:** Persistence red: Subinvolution, retained bits of conception.
* **Duration:** Lochia alba beyond 3 weeks suggestive of local lesions.

**POSTNATAL ASSESSMENT**

Postnatal care includes systemic examination of the mother and the baby and appropriate advice given to the mother during postpartum period.

The first postnatal examination is done and the advice is given on discharge of the patient from the hospital. The second routine postnatal care is conducted at the end of 6th week postpartum.

**AIMS AND OBJECTIVES OF POSTNATAL CARE**

* To assess the health status of the mother. Medical disorders like diabetes, hypertension, thyroid disorders should be reassessed.
* To detect the treat at the earliest any gynecological condition arising out of obstetric legacy.
* To note the progress of the baby including the immunization schedule for the infant.
* To impart family planning guidance.

**PROCEDURE OF POTNATAL CARE**

* Examination of the mother
* Advice given to the mother
* Examination of the baby and advice

**Examination of the mother:**

1. Routine examination:

* Weight
* Pallor
* Blood pressure
* Tone of the abdominal muscles
* Examination of the breast

2. Pelvic examination should be done only when indicated.

3. Laboratory investigations (e.g. Hemoglobin) depending on the clinical need may be advised.

**Examination of the baby:**

**Advice given:**

**General:**

* If the patient is in sound health she is allowed to do her usual duties.
* Postpartum exercises may be continued for another 4-6 weeks.
* Vaccination (MMR, Hep. B)
* To evaluate the progress of the baby periodically and to continue breastfeeding for 6 months.
* Family planning counseling and guidance

**MANAGEMENT OF MINOR AILMENTS**

|  |  |  |
| --- | --- | --- |
| **MINOR AILMENTS**  | **DESCRIPTION**  | **MANAGEMENT**  |
| **After pain**  | It is the frequent spasmodic pain felt in the lower abdomen after delivery for a viable period of 2-4 days.  | * Massaging the uterus with expulsion of clots
* Administration of antibiotics
* Antispasmodic administration
 |
| **Pain on the perineum**  | Discomfort on the perineal region due to childbirth and episiotomy  | * Examine the perineum for any vulvo-hematoma.
* Analgesic should be given.
* Apply ice packs to the perineum during 1st 24 hours, apply warmth by sitz bath.
 |
| **Correction of anemia**  | Majority of the women is in an anemic state following delivery  | Supplimentary iron therapy (ferrous sulphate 200mg) is to be given daily for a minimum period of 4-6 weeks. |
| **Hypertension**  | Increased BP during puerperium period  | * Treated until it comes to the normal limit.
* Urine analysis of proteinuria.
 |
| **Breast engorgement**  | It is due to exaggerated normal venous and lymphatic engorgement of the breasts which precedes lactation  | * Encourage wearing support bra at all times.
* Encourage breast feeding.
* Encourage warm soak before feeding.
* Administer analgesic
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**MANAGEMENT OF COMMON GYNECOLOGICAL PROBLEMS**

|  |  |  |
| --- | --- | --- |
| **GYNECOLOGICAL PROBLEM** | **DESCRIPTION** | **TREATMENT** |
| Irregular vaginal bleeding  | It is not uncommon to encounter irregular or at times, heavy bleeding after 4-6 weeks following an uneventful period after delivery. Sometimes likely due to retained bits of conceptus  | USG followed by dilatation and curettage operation  |
| Leucorrhea  | Profuse white discharge due to vaginitis, cervicitis, subinvolution  | Specific treatment for illness  |
| **Cervical Ectopy (Erosion)**  | Hormones induces ectopy during pregnancy takes a longer time (about 12 weeks) to regress  | Ectopy should be examined after 6 weeks. Cauterization can be done |
| **Retroversion**  | Associated with sub involution with symptoms  | Pessary is inserted after correcting position and kept for about 2 months |
| **Uterine Descent**  | Slight degree of uterine descent with cystocele and relaxed perineum due to weakend pelvic fasia  | Pelvic floor exercise. If surgery needed should be done after 3 months |

**PROMOTING PHYSICAL AND EMOTIONAL WELLBEING IN PUERPERIUM**

**Preventing Infection:**

* **Genital tract infection:** It can be prevented by careful attention to the mothers hygiene. Encouragement of drainage of lochia by early ambulation and by prevention of cross infection.
* **Urinary tract infection:** It may be caused by lack of vulval hygiene and is more likely to occur if there is retention of urine or stasis due to poor fluid intake or lack of exercises.
* **Upper respiratory infection:** It occurs as cross infection. Midwives suffering from colds, should not work in the ward during the most acute phase of the condition and should wear a face mask when attending to the mother of the baby.
* **Breast infection:** Infective and non-infective infections can occur in breast. This can be prevented by hygiene and breast care.

**Ambulation and Exercise:**

* Ambulation should be encouraged as soon as possible after delivery and approximately 6hrs after delivery.
* Ambulation increases muscle tone and venous return from the legs and lower abdomen. It also increases the drainage of lochia and voiding of the urine.
* Postnatal exercise should be done each day which helps to increase muscle tone and increase muscle tone and are usually comment during the 1st 3 days after delivery.

**Rest and Sleep:**

* Ensuring adequate rest and sleep is a vital part of the postnatal care.
* When mother return home, the need for adequate rest should be emphasized and the family should be encouraged to take care of the baby.

**Care of Breast:**

* Breast should be supported by a well fitted bra worn by day and night.
* Breast engorgement should be detected and encourage breast feeding. Engorgement may be relieved by expressing small amount of milk.
* Breast care should be given before and after feeding the baby.
* Breast discomfort can be relieved by a mild analgesic.

**Nutrition:**

* A well balanced diet should be provided to a puerperal mother.
* Nutritional needs depends on pre-pregnancy weight ideal weight for height and whether mother is breast feeding. Calorie needs of the mother is 500 kcal/day and mother may require increased fluids and vitamins and minerals.

**Prevention of Anemia:**

* Even moderate blood loss at delivery may reduce the Hb to less than 10.5 gms.
* Any degree of anemia will reduce the body’s resistance to infection and its capacity for healing.
* It is important therefore any degree of anemia is identified and treated.
* Most cases can be corrected with a course of oral iron.

**FAMILY DYNAMICS AFTER CHILD BIRTH**

Becoming parents creates a period of instability that requires behaviours that promote the transition to parenthood. Parents must explore their relationship with the infant as well as redefine the relationship between themselves. The nurse who understands the parenting process should assist family members with the transition to parenthood.

**Parenting process:**

**Steele and Pollack** describe parenting as one process with 2 components:

* Being practical or mechanical in nature, involves cognitive and motor skills.
* Emotional in nature, involves cognitive and effective skills.

**Cognitive-motor Skills:**

The process of parenting includes childcare activities such as feeling, holding, clothing and cleaning the infant, protecting it from harm and providing mobility for it. Many parents have to learn how to do these tasks.

**Cognitive effective Skills:**

The cognitive effective skills of parenting includes an attitude of tenderness, awareness and concern for the child needs and desires.

**Parental acquaintance, bonding and attachment:**

Bonding describes the initial mutual attraction between people, such as between parent and child at first meeting.

The concept of attachment include mutuality that is infant displays signalling behaviors corresponding set of maternal behaviors such as crying, smiling that initiate the contact and bring the mother near to child.

During this period families engage in identification of new baby through the claiming process.

**Communication between parent and child:**

Attachment is strengthened through the use of sensual responses or abilities by both partners in parent-child interaction. Nurses should keep in mind, however, that there may be cultural variations in the described behavior.

**Touch:**

* Many mothers reach out for their infant as soon as they are born and cord is cut. They lift them to their breast, enfold in their arms and cradle them.
* Gentle stroking motions are used to sooth and quiet the infant.

**Eye to eye contact:**

* As newborn become functionally able to sustain eye contact, parents and infant spend much time gazing at one another often face to face; is a portion in which 2 faces are approximately **8 inches apart**.
* New born can be held close enough to see the parent’s face.
* Lights can be **dimmed** so that the child’s eyes will open.

**Voice:**

* A parent waits tensely for the first cry of the baby. Once the sound has reassured them of the baby’s health, they begin comfortable behavior.
* As parents talk in high pitched voice, the infant is calmed and alert and turns towards them.

**Odor:**

* Mothers comment on the smell of their baby when first born and have noted that each child has a unique odor.
* Infants learns rapidly to distinguish the odor of their own mother’s breast milk.

**Entrainment:**

New born move in tune with the structure of adult speech, they wave their arms, lift their heads, kicks their leg, dancing in time to their parents voice. This means infant has developed culturally determined rhythms.

**Biorhythmicity:**

The unborn child can be said to be in time with the mother natural rhythms, such as heart beats.

After birth a crying infant may be soothed by being held in position in mothers arm where her heart beat can be saved.

**Early contact:**

The first hours or day after birth may be a sensitive time for parent infant interaction. Early close contact may facilitate the attachment process between parent and child.

**Extended contact:**

One method of family-centred care is the provision of rooming in facilities for the mother and her baby.

**Parenteral tasks and responsibility:**

* Parents need to reconcile the actual child with the family with the fantasy and dream: This means coming to terms with the infant physical appearance, sex, innate temperament and physical status. If the child differs greatly from the fantasy child, parents may delay acceptance for a period.
* Parents need to establish the newborn as a person separate from themselves: someone having may depending needs and requiring much nurturing.
* Parents need to become adopt in the care of infant Care giving activities, noting the communication cues given by infant to indicate needs and responding approximately.
* Parents need to establish reasonable evaluative criteria to use in assessing the success or failure of care given to infant.
* Parent must establish a place for the newborn with family group All the family members must adjust their role to the new comer.
* Parents need to establish the primary of their adult relationship to maintain the family as the group.

**Rubin’s Postpartum phase of regeneration:**

**Taking-in phase: 1st 3 days**

* Mothers focus on her own primary needs, such as sleep and food.
* This phase is not an optimum time to teach the mother about baby care.

**Taking hold phase: days 3 to 10**

* The woman is more in control of independence.
* The woman begins to assume the tasks of mothering. This phase is an optimum time to teach the mother about baby care.

**Letting go- phase:**

* Mother may feel deep loss over-separation of the baby from part of the body and may grieve over the loss.
* Mother may be caught in a dependent/ independent role, wanting to feel safe and secure yet wanting to meet decisions.
* Teenage mothers need special consideration because of the conflict taking place within them as part of adolescence.

**Factors influencing parental responses**

**Maternal age over 35**

* The mother and fetus are generally thought to be highest risk when is an adolecent mother or over 35 years.
* Fatigue and need more rest for more rest to be major concern.
* Assist mother in regaining strength and muscle tone.

**Social network:**

* The families and friends of the parents and newborn child form an important dimension of the parents social network.
* Grand parents or in laws who assisted with house hold activities/responsibility and who did not intrude in to parents privacy or critically judge them were most appreciated.

**Culture:**

Knowledge of the cultural beliefs can help the nurse make more accurate assessment and diagnosis of observed parenting behaviour.

**Socioeconomic conditions:**

* Family who can afford the added expenses of a newborn may experiences minimal financial stress.
* Nursing measures designed to help persons experiencing stress due to economic circumstances involve referrals to social and community agencies as well as health agencies.

**Personal aspiration:**

* Parenthood interferes with or curtails with the plans for personal freedom or advancement with in carrier.
* Nursing intervention includes providing opportunities for parents to vent their feelings to an objective listeners, discuss measures to permit personal growth of the parent (part-time employment, volunteer work use of agencies)