LESSON PLAN ON

POST PARTUM HAEMORRHAGE

SUBJECT: Obstetrics and Gynaecological Nursing CLASS: 4TH year BSc Nursing

UNIT: DURATION: 1Hr

TOPIC: Post-partum hemorrhage

METHOD OF TEACHING: Lecture cum discussion

AV AIDS: Black board, LCD, OHP

PREVIOUS KNOWLEDGE OF THE STUDENTS: Students have not exposed to the topic before

GENERAL OBJECTIVE

At the end of the class, the students will be able to gain adequate knowledge regarding postpartum heamorrhage and utilize this knowledge in caring the patients with PPH with a favorable attitude

SPECIFIC OBJECTIVE

At the end of the class students will:

- define PPH
- describe the types of PPH
- lists down the causes of PPH
- explain diagnosis and investigations of PPH
- enlist the preventive measures of PPH
- describe the management of third stage bleeding and true postpartum hemorrhage

- enumerate the secondary postpartum hemorrhage

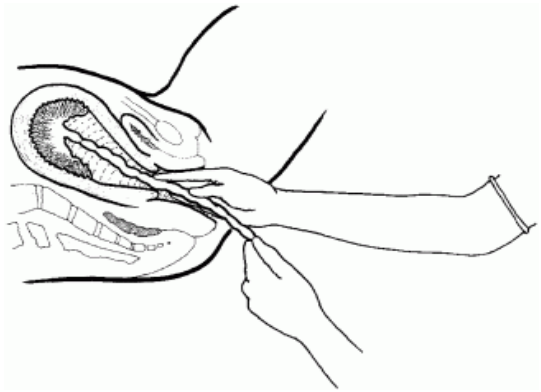
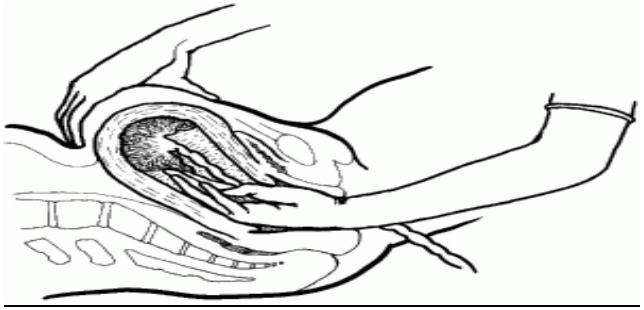
SL NO	TIME	SPECIFIC OBJECTIVE	CONTENT	TEACHING LEARNING ACTIVITY	AV aids	EVALUATION
1	2min	To introduce the topic	**Introduction** All women lose some blood as the placenta separates from the uterus and immediately afterward. And women who have c-sections generally lose more than those who give birth vaginally. Unfortunately, some women bleed too much after birth and require special treatment. This excessive blood loss is called a postpartum hemorrhage (PPH) and it happens in up to 6 percent of births.	Teacher introduces the topic and students listens		
2	2min	To define PPH	**Definitions** Quantitative definition Amount of blood loss in excess of 500 mi following birth of the baby Clinical definition Any amount of bleeding from or in to the genital tract following birth of baby up to the end of puerperium which adversely affect the general condition of the	Teacher defines Postpartum hemorrhage and students understands	LCD	Define PPH
3	4min	To describe the types of PPH	**Types** ● **Primary** Haemorrhage occurs within 24 hours following the birth of the baby. In the majority , haemorrhage occurs within 2 hours following delivery . **these are of two types** □ **Third stage haemorrhage** – bleeding occurs before expulsion of placenta □ **True postpartum haemorrhage** – bleeding occurs subsequent to expulsion of placenta. ● **Secondary**	Teacher describes about the types and students takes down the notes	Black board	What are the types of PPH?

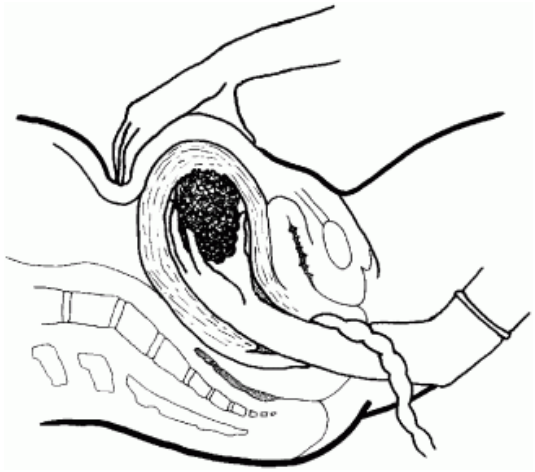
4	10min	To lists down the causes of PPH	Haemorrhage occurs beyond 24 hours and within puerperium ,also called delayed or ate puerperal hemorrhage **Causes** **1. Primary postpartum haemorrhage** **Atonic causes** ● Grand multi para ● Over distention of the uterus eg: multiple pregnancy ,hydramnios and large baby ● Malnutrition and anemia ● Antepartum haemorrhage ● Prolonged labour ● Anesthesia ● Augmentation of delivery by oxytocin ● Persistent uterine distention eg: retention of partially separated placenta or bits of placenta or blood clots ● Malformation of uterus ● Uterine fibroid ● Miss managed third stage of labour –includes too rapid delivery of the baby ,premature attempt to expel the placenta before it is separated ,kneading and fiddling of the uterus ,pulling the cord bladder not being evacuated ● Constriction ring ● Precipitate labour **Traumatic cause** ● Following operative delivery ● Blood loss from episiotomy wound	Teacher lists downs and explain about each causes ,students comprehend and takes down the notes	OHP	What are the causes of PPH?

			● Excess Blood loss in caesarian section			
5	3min	To explain diagnosis and investigations of PPH	**Combination of traumatic and atonic cause** ● Blood coagulation disorders ,acquired or congenital **Diagnosis & investigations** Postpartum haemorrhage is diagnosed clinically when significant blood loss (>500mL) is observed. While managing the blood loss, several key examinations need to be performed in an attempt to identify the cause and control the haemorrhage. These include: • Examination of uterine size; • Examination of the placenta for completeness; and • Examination of the birth canal for trauma .	Teacher discusses the methods of diagnosis of PPH and students participates in discussion	Black board	How will postpartum hemorrhage is diagnosed?
6	10mni	To Enlist the preventive measures of PPH	**Prevention** Antenatal ● Improvement of health status ● High risk group are to be screened and delivered in a well equipped hospital ● Blood grouping and typing should be done specially in the vulnerable groups so that no time is lost during emergency Intranatal ● Judicious administration of sedative and analgesic drugs	Teacher explains the preventive measures and students listens	LCDD	How can you prevent post partum haemorrhage?

7	15min	To describe the management of third stage bleeding postpartum haemorrhage	● Hasty delivery of baby should be avoided ● Local or epidural analgesia preferred in forceps, ventouse, breech deliveries ● Services of an expert anesthetist while delivery is conducted ● Judicious administration of oxytoccic ● Temptation of fiddling and kneading with uterus or pulling the cord should be avoided ● Examination of placenta and membrane should be a routine ● In all cases of induced or accelerated labour by oxytocin, infusion should be continued for at least one hour after delivery and prophylactic ergometrine should be given with the delivery of anterior shoulder ● Exploration of utero vaginal canal for evidence of trauma following difficult labour ● Observe patient about for two hours after delivery **MANAGEMENT OF THIRD STAGE BLEEDING** **STEPS OF MANAGEMENT** ● Placental site bleeding ● **Traumatic bleeding** Placental site bleeding □ To palpate the fundus and massage :the massage is to be done by placing four fingers behind the uterus and thumb in front . however ,if bleeding continues even after the uterus becomes hard ,suggest presence of genital tract injury □ Ergometrine 0.25mg or methergine 0.2 mg is given IV	Teacher explains the management of third stage bleeding PPH and students listens	LCD	Explain the steps of mannual removal Of placenta

			- Sedation may be given with morphine 15 mg IM - To start a dextrose saline drip and arrange for blood transfusion, if necessary - To catheterize the bladder ,if it is found to be full - During this procedure ,if if features of placental separation are evident ,expression of the placenta is to be done either by controlled cord traction method .if features of controlled cord traction are not evident ,manual removal of placenta under general anesthesia is to be done Traumatic bleeding The utero vaginal canal is to be explored under general anesthesia after the placenta is expelled and haemostatic sutures are placed on the offensing sites <u>Manual removal of placenta –steps</u> ❖ Step 1: the operation is done under general anesthesia. In extreme emergency, where anesthesia is not available, the operation may have to be done under deep sedation with 10 mg diazepam given IV. The patient is placed in lithotomy position. Antiseptic precautions are meticulously taken. The vulva and vagina swabbed with antiseptic solutions and sterile leggings are placed as in other vaginal operations. The bladder is catheterized ❖ Step 2: one hand is introduced in to the uterus after smearing with the anti septic solution in cone shaped manner following the cord, which is made taut by the other hand . While introducing the other hand, the labia are separated by the fingers of the other hand. the fingers of the uterine hand should locate the margin of the			

			placenta  ❖ Step 3 :counter pressure on the uterine fundus is applied by the other hand placed over the abdomen . the abdominal hand should steady the fundus and guide the movement of the fingers inside the uterine cavity till the placenta is completely separated  ❖ Step 4 : as soon as the placental margins are reached, the fingers are insinuated between the			

8	10 min	To explain the management of t true postpartum bleeding	placenta and the uterine wall with the back of the hand in contact with the uterine wall. The placenta is gradually separated with a sideways slicing movement of the fingers ,until whole of the placenta is separated  ❖ Step V When placenta is completely separated, it is extracted by traction of the cord by the other hand . the uterine hand is still inside the uterus for exploration of the cavity to be sure that nothing is left behind ❖ Step V I Intravenous ergometrine 0.25 mg is given and the uterine hand is gradually removed while massaging the uterus by the external hand to make it hard . after the completion of manual removal, inspiration of the utero vaginal canal is to be made to exclude any injury ❖ Step V II The placenta and membrane are to be	Teacher explains the management of true postpartum haemorrhage	LCD	Explain the management of true postpartum haemorrhage

			inspected for completeness and be sure that the uterus remains hard and complete **<u>MANAGEMENT OF TRUE POST PARTUM HAEMORRHAGE</u>** <u>Immediate measures</u> ● Call for extra help ● Put in one or more large bore IV cannulas ● Keep patient flat and warm ● Send blood for group, cross matching diagnostic test and and ask for 2 units of blood ● Infuse rapidly 2 litters of normal saline or plasma substitute like haermocele ,an urea linked gelatin, to re expand the vascular bed . it does not interfere with cross matching ● Give oxygen by mask 10-15L/min ● Start 20 units of oxytocin in 1 L of normal saline IV at the rate of 60 drops per minute . transfuse blood as soon as possible ● One midwife or/ rotating house man should be assigned to monitor the following 1)pulse 2)blood pressure 3) respiratory rate and oxymeter 4)type and amount of fluid the patient has received 5)urine output 6)drugs type 7)CVP <u>Actual management</u> First step is to control the fundus and to note the feel of the uterus . if the uterus is flabby ,the bleeding is likely to be from the atonic uterus . if the uterus is firm and contracted ,the bleeding is is likely of traumatic origin			

			Atonic uterus :step 1 a. **Massage the uterus** to make it hard and express the blood clot b. Methergin 0.2 mg is given IV c. Inj. Oxytocin drip is started (10 units in 500 ml of normal saline)at the rate of 40-60 drops / minute d. Foley catheter to keep the bladder empty and to monitor urine out put **e.** To examine the expelled placenta and membrane for missed cotyledon or piece of membrane if the uterus failed to contract , proceed to the next step **Step 2** **The uterus is to be explored under general anaesthesia,** simultaneous inspection of the cervix, vagina specially the para ureteral region is to be done to exclude co- existing bleeding sites from the injured area. In refractory cases : ● Inj. 15 methyl $PGF_{2\alpha,}250_{\mu g}$ IM in deltoid muscle every 15 minute (up to maximum of 2mg) OR ● Misoprostol (PGE1)1000µg per rectum is effective ● When uterine atony is due to tocolytic drugs, calcium gluconate 1 g IV slowly should be given to neutralize the calcium blocking effect of these drugs **Step 3** **Uterine massage and bimanual compression** **a)**The whole hand is introduced in to vagina in cone shaped fashion after separating the labia with the fingers of the other hand b) the vaginal hand is clenched in to fist with the back of			

9	10min	To enumerate the secondary postpartum haemorrahage	the hand directed posteriorly and the knuckles in the anterior fornix c) other hand is placed over the abdomen behind the uterus to make it anteverted d) the uterus is firmly squeezed between the two hands . it may be necessary to continue the compression for a prolonged period untill the tone of the uterus is regained . this is evidenced by absence of bleeding if the compression is released **step 4** **uterine tamponade** Tight intra uterine packing done uniformly under general anaesthesia**.** A 5 meters long strip of gauze ,8cm wide folded twice is required. The gauze should be soaked in anti septic cream before introduction. The gauze is placed high up and packed in to the fundal area first while the uterus is steadied by the external hand . gradually the rest of the cavity is packed so that no empty space is left behind. A separate pack is used to fill the vagina. An abdominal binder is placed . intra uterine plugging acts not only by stimulating uterine contraction but excerts direct haemostatic pressure to the open uterine sinuses. Anti biotic should be given and the plug should be removed after 24 hours Intra uterine packing is useful in a case of uncontrolled postpartum haemorrhage where other methods have failed and the patient is being prepared for transport to a tertiary care unit **Balloon tamponade** Tamponnade using various type of hydrostatic balloon catheter has mostly replaced uterine paking. Mechanism of action is similar to uterine packing. Foley catheter ,bakri balloon ,condom catheter or sengstaken – blakemore tube is inserted in to uterine cavity and the balloon is inflated with normal saline it is kept for 4-6	Teacher discuss regarding secondary post partum hemorrhage and students participate in discussion	LCD	Explain about secondary postpartum hemorrhage

			hours . it is success ful in atonic PPH Step V: Surgical methods to control PPH are many. An outline of step wise uterine devascularisation procedures are given below ● Ligation of uterine artery –the ascending branch of the uterine artery is ligated at the lateral boarder between upper and lower uterine segment ● Ligation of the ovarian and uterine artery anastomosis ● Ligation of anterior devision of internal ileac artery ● Angiographic arterial embolisation Step VI Hysterectomy rarely uterus fails to contract and bleeding continues in spite of the above measures			
10	1min	To summarize	**SECONDARY POST PARTUM HEMORRHAGE** **Causes** The bleeding usually occurs between 8th 14 th day of delivery. The cause of late postpartum haemorrhage are ● Retained bits of cotyledon or membranes ● Infection and separation due to delayed healing process ● Secondary haemorrhage from caesarean section wound usually occur in 10-14 days ● Withdrawal bleeding following oestrogen therapy for suppression of lactation ● Other rare causes are :chorion epithelioma, carcinoma of cervix, placental polyp, infected	Teacher summarize the topic and students listens		

		the topic	fibroid and puerperal inversion of uterus			
11	1min	To conclude the topic	**Diagnosis** 1. Signs and symptoms ● The bleeding is bright red and of varying amount . rarely it may be brisk ● Varying degree of anaemia and and evidence of sepsis 2. Internal examination –reveals evidence of sepsis, sub involution of the uterus and often pattulus cervical os **3.** Ultrasonography-is useful in detecting the bits of placenta inside the uterine cavity	Teacher concludes the topic and students listens		
12	2min	To obtain feed back from the students	**Management** **Supportive therapy** 1. Blood transfusion if necessary 2. To administer methergine 0.2mg IM if bleeding is uterine in origin **3.** To administer anti biotics as a routine **Conservative** If the bleeding is slight and no apparent cause is detected, a care full watch for a period of 24 hours or so is done in the hospital	Teacher asks questions and students gives answers		
13	1min	To encourage students for self directed learning	**Active treatment** As the commonest cause is due to retained bits of cotyledon or membranes, it is preferable to explore the uterus urgently under general anaesthesia. The products are removed by ovum forceps. Gentle curettage is done by using flushing curette. Methergine 0.2 mg is given IM. The material s removed are to be sent for histological examination			

			SUMMARY Postpartum hemorrhage is a significant cause of maternal morbidity and mortality. Most postpartum hemorrhages are caused by uterine atony and occur in the immediate postpartum period. The class dealt with definition, types, causes, diagnosis and management measures for PPH. **CONCLUSION** Postpartum haemorrhage (PPH) remains an important complication of childbirth and contributes significantly to maternal mortality. Care was adjudged to be substandard in most cases. Significant blood loss from any cause requires standard maternal resuscitation measures Blood loss of more than 1,000 mL requires quick action and an interdisciplinary team approach. Hysterectomy is the definitive treatment in women with severe, intractable hemorrhage. In patients who desire future fertility, uterus-conserving treatments include uterine packing or tamponade procedures, B-lynch uterine compression sutures, artery ligation, and uterine artery embolization. **RECAPITULATION QUESTIONS** ● Define PPH ● What are the types of PPH? ● What are the causes of PPH ● Explain the steps of manual removal Of placenta ● Explain about secondary postpartum hemorrhage			

			Assignment Write Down the nursing management of patients of patients with post partum hemorrhage			

BIBLIOGRAPHY

1. Dutta DC.Text book of obstetrics .London:New Central Book Agency(P)Ltd;2013.
2. Bennett V. R, Brown.K.L, Myles Text Book for Midwives.London: ChurchilLivingstone; 2013.