CONTRACEPTION

DR. MEENAKSHI SURVE
Associate Professor
Dept. of OBGY
MIMER MEDICAL COLLEGE

COMPETENCY NO.	COMPETENCY	DOMAIN	LEVEL	CORE
OG 19.1	Describe and discuss counselling for contraception, puerperal sterilization	S	KH	Y
OG 19.2	Counsel in a simulated environment, contraception and puerperal sterilisation	K	KH	Y
OG 19.3	Observe/ assist in the performance of tubal ligation	S/A/C	SH	Y
OG 19.4	Enumerate the indications for, describe the steps in to insert and remove an intrauterine device in a simulated environment	S	SH	Y

COMPETENCY NO.	COMPETENCY	DOMAIN	LEVEL	CORE
OG 21.1	Describe and discuss the temporary and permanent methods of contraception, indications, technique and complications; selection of patients, side effects and failure rate including - Ocs - Male contraception - Emergency contraception and - IUCD	K	KH	Y
OG21.2	Describe & discuss PPIUCD programme	K	K/KH	Y

* Font colour codes: Green-2nd and 3rd Phase, Blue-4th Phase

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 19.1	Describe and discuss counselling for contraception, puerperal sterilization		K	KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce		

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 19.2	Counsel in a simulated environment, contraception and puerperal sterilisation		S/A/C	SH	Y	DOAP session	Skill assessment	Community medicine	

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 19.3	Observe/ assist in the performance of tubal ligation		S	KH	Y	DOAP session, Intraoperative	Skill assessment		

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting / Correlation/ Sharing	(Yes/ No)
OG 19.4	Enumerate the indications for, describe the steps to insert and remove an intrauterine device in a simulated environment	Should be able to enumerate the indications for insertion of intrauterine device	S	SH	Y	DOAP session	Skill assessment	Bioethics, Community medicine	AETCOM
		Should be able to enumerate the indications for removal of intrauterine device							
		Should be able to identify the eligible woman for IUD insertion (WHO-Medical eligibility criteria)							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting / Correlation/ Sharing	(Yes/ No)
OG 19.4	Enumerate the indications for, describe the steps to insert and remove an intrauterine device in a simulated environment	Should be able to counsel the eligible woman regarding the need for IUCD insertion	S	SH	Y	DOAP session	Skill assessment	Bioethics Community medicine	AETCOM
		Should be able to elicit the proper history (obst/ med/ surgical) and her FP goals before insertion							
		Should be able to record the consent before the IUCD insertion							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting / Correlation/ Sharing	(Yes/ No)
OG 19.4	Enumerate the indications for, describe the steps to insert and remove an intrauterine device in a simulated environment	Should be able to document the checklist (history / examination / IUD tray) before insertion	S	SH	Y	DOAP session	Skill assessment	Bioethics Community medicine	AETCOM
		Should be able to demonstrate the steps of IUD insertion in a simulated environment							
		Should be able to document the steps of IUD insertion and removal procedure							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 19.4	Enumerate the indications for, describe the steps to insert and remove an intrauterine device in a simulated environment	Should be able to elaborate regarding the advice to be given after IUD insertion	S	SH	Y	DOAP session	Skill assessment	Bioethics Community medicine	AETCOM
		Should be able to explain to woman the situations where she has to contact the doctor							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 21.1	Describe and discuss the temporary and permanent methods of contraception, indications, technique and complications; selection of patients, side effects and failure rate of IUCD	Should be able to identify different IUD's, classify IUD's and elaborate their mechanism of action	K	KH	Y	Lecture, Small group discussion, Bedside clinic (OPD / OT/ Skill lab)	LAQ, SAQ, MCQ's Viva voce	Community medicine	
		Should be able to identify the eligible women for IUCD insertion (Selection of patients)							
		Should be able to enumerate the indications for insertion of intrauterine device							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 21.1	Describe and discuss the temporary and permanent methods of contraception, indications, technique and complications; selection of patients, side effects and failure rate of IUCD	Should be able to enumerate the benefits, risks, side effects and contraindications of IUD insertion	K	KH	Y	Lecture, Small group discussion, Bedside clinic (OPD / OT/ Skill lab)	LAQ, SAQ, MCQ's Viva voce	Community medicine	
		Should be able to discuss the failure rate of IUD							
		Should be able to discuss the management of Lost IUD strings in an IUCD user							

Competency No.	Competency	Specific Learning Objectives	Domain	Level	Core	Teaching Methods	Assessment Methods	Integration	Alignment
		At the end of the session, Phase-IV IMG should be able to,	K/S/A/C	K/ KH/ S/ SH/ P	Y/N			Nesting/ Correlation/ Sharing	(Yes/ No)
OG 21.2	Describe & discuss PPIUCD programme		K	K/ KH	Y	Lecture, Small group discussion, Bedside clinic	Written/ Viva voce		

INTRAUTERINE CONTRACEPTIVE DEVICES

Introduction

- Intrauterine devices are highly effective method of reversible contraception.
- Less than 2% of women in reproductive age group use this method (fear of bleeding, sepsis, displacement and perforation).
- Worldwide, over 100 million women have used intrauterine contraceptive intrauterine contraceptive device device(IUD).
- In India only 11% of women use this method

History

- Grafenberg's ring (1920): Intrauterine steel ring which had higher expulsion rates.

- Margulies coil (1960) by Lazer Margulies → 1st plastic devise with a memory, which allowed the use of inserter and reconfiguration of shape in uterus → but coil was large associated with bleeding and cramping , hence was withdrawn.

- In 1962, Lippes loop by Jack Lippes from USA became the most popular non-medicated IUCD.

- Copper bearing plastic device : first suggested by Dr. Jaime Zipper whose experiments indicated that Cu acted locally on endometrium.

- It was Haward Tatum who combined this idea with development of T-shape→ 1st copper containing IUD was Cu T 200, also called as Tatum-T.

- Multiload Copper-T: was introduced in late 70’s

- Hormone bearing plastic device: In early 80’s Doyle and Clewe developed progestin releasing IUD’s. Progesterone releasing IUD’s such as Progestasert thus evolved.

Old IUCD's

Lippies Loop

Self T Coil

Dalkon Shield

New IUCD's

Cu T 200

Cu T 220

Multi load 375

Nova T

Classification

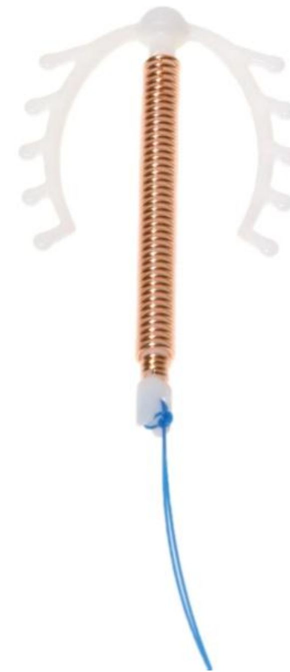
- Non medicated IUDs:
  - Lippe’s loop
  - Dalkon shield
  - Saf-T-coil.
- Medicated copper containing IUDs
  - Cu T 200
  - Cu T 380 A
  - Multiload-250
  - Multiload-375
  - Nova T
- Hormone containing IUDs
  - LNG-20
  - Copper 7
  - Progestasert

Different IUD’s

- Cu T 200:
  - Contains 200 sq mm surface area of wire containing Cu.
  - Cu wire wounded round the vertical stem, T shaped frame made of Polyethylene, with polyethylene threads
  - Life span - 3 years
  - Failure rate - 3%
  - Replaced by modern copper IUDs containing more copper with increased efficacy and life span

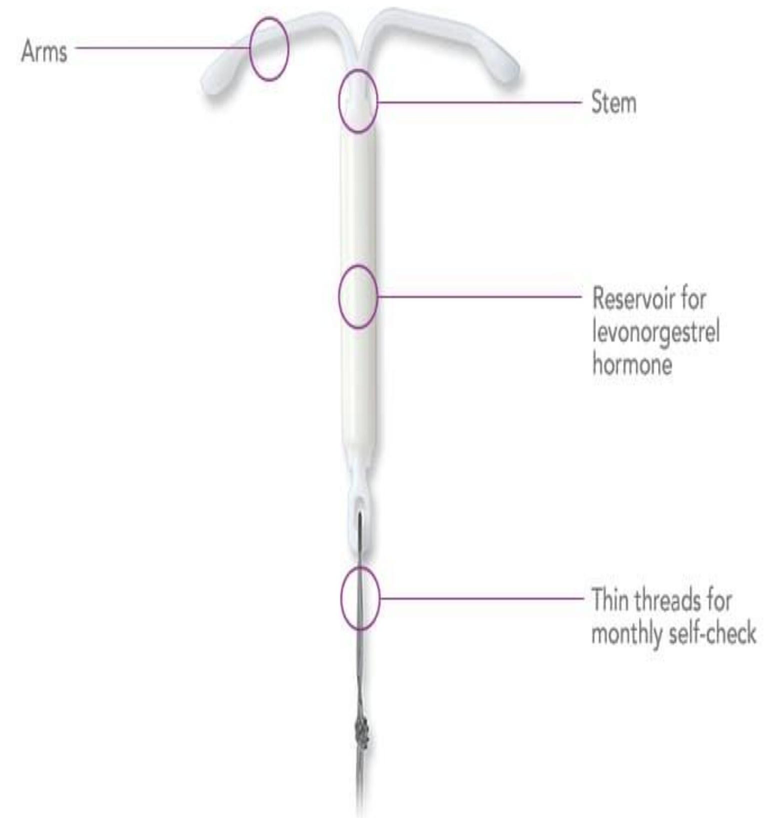
- Cu T 380A:
  - 380 mm^2 of Cu wire os wounded on stem with extra copper sleeves on both arms of T.
  - “A” indicates Arms, indicating importance of copper sleeve on each arm with introduction of sleeves efficacy and lifespan is increased.
  - Contraception span -10 yrs
  - Failure rate: 0.3 to 0.8 per HWY
  - Further ball at the bottom of stem reduce risk of perforation and reduces cramp like pain
  - ***CuT-380Ag*** – Copper wire on the stem has a silver core to prevent fragmentation and extend the life span of the copper.
  - ***CuT 380 slimline* -** It has copper sleeves flushed at the ends of horizontal arms to facilitate easier loading and insertion.

- Multiload 375
  - It has 375 mm^2 of copper wire wound around its stem.
  - The flexible arms are designed to minimize expulsions.
  - The multiload 375 and CuT-380 A are similar in their efficacy and performance.
  - Contraception span – 5years

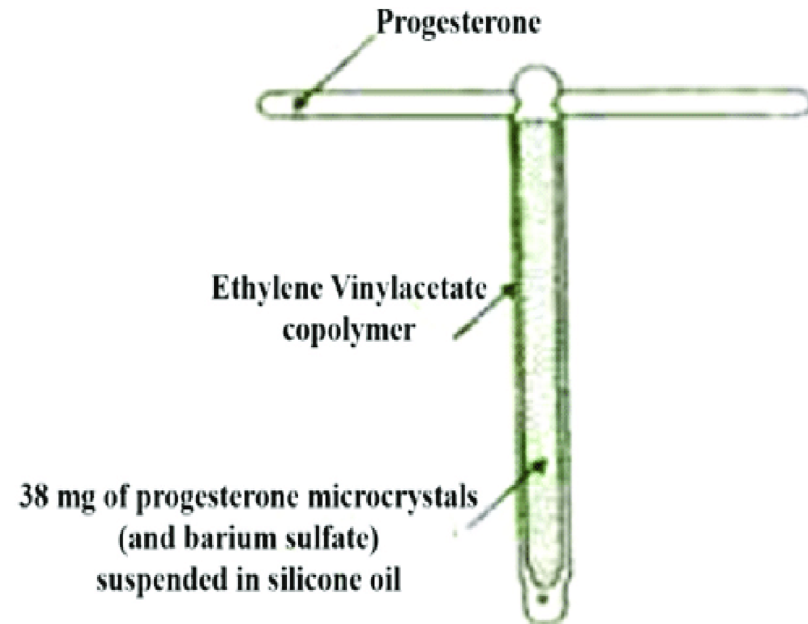


- LNG-20

  - T-shaped polyethylene frame (T-body) with a steroid reservoir around the vertical stem.
  - The reservoir : mixture of levonorgestrol and silicone containing a total of 52 mg LNG which is covered by a semi-opaque silicone membrane.
  - The reservoir releases : 20mcg per day which declines to half rate after 5 years.
  - Contraception span-5 yrs
  - Failure rate-0.1 to 0.2 per HWY



- Progestasert: Progesterone (pg) releasing device
  - 0.25mm thick, Solid poly EVA (ethyl vinyl acetate) side arms and a hollow core.
  - Microcrystalline Pg (diffusion) is suspended in the core in the silicone oil with BaSo4.
  - Interfere with implantation in endometrium, thickening of cervical mucus.
  - Adv: lower menstrual blood flow, decreased dysmenorrhea.
  - Disadv: Need to be replaced yearly



Mechanism of action

- Non medicated IUDs
  - Foreign body reaction (produces sterile inflammatory response) which is spermicidal.
  - Rings of stainless steel and plastic rings act as mechanical barrier for fertilization.
- Copper IUDs
  - Leads foreign body reaction → alteration in cervical mucus & endometrial secretion→ release of cytokine peptides known to be cytotoxic.
- Hormone containing IUD
  - Levonorgestrel IUD suppresses endometrium leading to atrophy & thickens cervical mucus hindering penetration of sperm.

WHO- Medical Eligibility Criteria for IUD

CATEGORY 1: Women can use the IUD with no restrictions.

- Women with a history of ectopic pregnancy.
- Following a first-trimester abortion (spontaneous or induced).
- Women who are 4 weeks or more postpartum.
- Women who have benign ovarian tumors (or cysts) or uterine fibroids that do not distort the uterine cavity.
- Women with a genital tract infection that is not sexually transmitted, such as vaginitis (e.g., bacterial vaginosis, candida albicans).
- Women who have a history of PID with a subsequent pregnancy
- Women who have breast disease, including breast cancer.
- Women who have viral hepatitis or malaria.
- Women who have diabetes, hypertension, or “uncomplicated” valvular heart disease.
- Women who smoke or are obese

CATEGORY 2: The following women can generally use the IUD (the advantages generally outweigh the risks), although additional care/follow-up may be needed:

- Women who are less than 20 years of age are nulliparous → risk of expulsion → smaller size of the uterus.

- Women with heavy/prolonged or painful menstruation, endometriosis, or severe dysmenorrhea.

- Women who are immediately following a second-trimester abortion provided there is no evidence of infection. Should be inserted only by a specially trained provider.

- Women who are less than 48 hours postpartum, provided there is no evidence of infection. Should be inserted only by a specially trained provider.

- Women who have anatomical abnormalities of the reproductive tract that do not distort the uterine cavity in a way that might interfere with IUD insertion or placement (e.g., cervical stenosis)

- Women who have STI other than gonorrhea and chlamydia (e.g Herpes, Syphilis)

- Women who are at risk of STI other than gonorrhea and chlamydia (e.g Herpes, Syphilis)

- Women who have h/o PID without a subsequent pregnancy

- Women who are HIV infected and are clinically well

- Women who have AIDS, are on ARV therapy and are clinically well.

- Women who have complicated valvular heart disease (e.g artificial shunts, RHD) although prophylactic antibiotics are advised for IUD insertion to prevent endocarditis.

- Women with anemia (including thalassemia, sickle cell disease and iron deficiency anemia), although there is some concern about increased menstrual blood loss with copper bearing IUD's.

Category 3: For the following women, use of IUD is not recommended (the risks generally outweigh the advantages); they should use a different method unless no other is available or acceptable

- Women who are 48 hrs to less than 4weeks postpartum
- Women with benign trophoblastic disease
- Women who have ovarian cancer should not have an IUD inserted (although they are Category 2 for continuation)
- Women who have a high individual risk for gonorrhea and chlamydia should not have an IUD inserted
- Women who have AIDS but are not on ARV therapy should not have an IUD inserted.

Category 4: the following women should not use the IUD

- Women who are pregnant.
- Women who have infection or signs/ symptoms of peurperal sepsis and post-septic abortion.
- Women with malignant trophoblastic disease.
- Women with cervical or endometrial/ uterine cancer.
- Women who have anatomical abnormalities of reproductive tract or fibroids that distort the uterine cavity in a way that might interfere with IUD insertion and placement.
- Women with pelvic tuberculosis.
- Women with unexplained vaginal bleeding.
- Women who have current PID, purulent cervicitis, chlamydia or gonorrhea.

Time of insertion

- During menses or shortly after the menses, this rules out pregnancy and also masks the insertion related bleeding.
- The IUD can be removed and replaced at the same time on any day of the menstrual cycle.
- Immediately after delivery (PPIUCD).
- Postpartum: At 4 to 6 weeks postpartum, after the uterus completely involutes.
- Women should wait until 6 weeks post-partum to have the LNG-IUS inserted.
- Concomitantly with first trimester pregnancy termination.
- Up to 5 days after intercourse. (Emergency)

CONSENT FORM

पूर्वतपासणी व पुर्नभेट पत्रिका
(तांबी)

संमती पत्रक भरून देणार :

नाव : श्रीमती ______ शिक्षण ______

(शिक्षित / अशिक्षित) ______ वय (पतिचे) ______ वय (पत्नीचे) ______

पतीचे नाव ______

पूर्ण पत्ता (तात्पुरता) गल्ली /रस्त्याचे नाव ______ गाव ______ पोस्ट ______ जिल्हा ______

पूर्ण पत्ता (कायमचा) गल्ली /रस्त्याचे नाव ______ गाव ______ पोस्ट ______ जिल्हा ______

धर्म ______ जात ______ धंदा ______ वार्षिक उत्पन्न रु. ______

प्राथमिक आरोग्य केंद्राचे नाव ______ उपकेंद्राचे नाव ______ तालुका ______ जिल्हा ______

हयात मुलगे ______ हयात मुली ______ एकूण अपत्ये ______ शेवटचे अपत्याचे वय ______

यापूर्वी वापरत असलेली संतति नियमन पद्धती ______

महोदय,

१. कृपया तांबी बसवायची व्यवस्था करावी. माझे वय ______ वर्ष आहे मी विवाहित असून माझे पती हयात आहेत. आम्हाला ______ अपत्ये आहे. ह्यापुढे संतति होण्यांचे तात्पुरते बंद व्हावे अशी इच्छा असल्यामुळे मी स्वखुषीने तांबी बसवून घेऊ इच्छिते. मला ह्याची पूर्ण जाणीव आहे की, कचित प्रसंगी तांबी बसवूनही गर्भधारणा होऊ शकते व त्यांसाठी सरकार/रुग्णालय/तांबी बसविणारे वैद्यकीय अधिकारी/कर्मचारी ह्यांना जबाबदार ठरविता येणार नाही.

मी हा निर्णय पूर्ण विचारांती घेतला असून तो कोणत्याही बाहेरील दबावाखाली, प्रलोभनासाठी किंवा कोणाच्याही जबरदस्तीमुळे घेतलेला नाही.

ठिकाण ______

दिनांक : / /

ज्याच्या देखत अंगठा घेतला त्याची सही ______ सही/डाव्या हाताचा अंगठा

नाव ______

मतप्रर्वतकाचे प्रमाणपत्र

मी. श्रीमती ______ यांना ओळखतो/ओळखते. माझ्या माहितीनुसार त्यांनी जी माहिती दिली आहे ती बरोबर आहे. प्राथमिक आरोग्य केंद्र ______ तील ''योग्य जोडपी'' नोंद वहीत अ. क्र. ______ नुसार याची नोंद आहे. मी त्यांना तांबी बाबत संपूर्ण माहिती देवून त्यांना तांबी बसवून घेण्यास प्रवृत्त केले आहे. माझी स्वत:ची संतति प्रतिबंधक केंद्राचे शस्त्रक्रिया झालेली आहे / नाही. माझ्या पतीची / पत्नीची संतति प्रतिबंधक शस्त्रक्रिया झालेली आहे / नाही.

नांव : श्री / श्रीमती ______

पत्ता ______ मुक्काम पोस्ट ______ तालुका ______ जिल्हा ______

ठिकाण : स्वाक्षरी

दिनांक

(१०)

शारीरिक तपासणी पाहणी

शेवटच्या गर्भपाताची तारीख ______ शेवटच्या प्रसूतीची तारीख ______

शेवटच्या मासिकपाळीची तारीख ______

मासिक पाळी विषयी माहिती

- मासिक पाळी : नियमित / अनियमित • रक्तस्त्राव : कमी / जास्त • ओटी पोटात दुखते / दुखत नाही.
- गेल्या तीन महिन्यात थंडी / ताप / अंगावर पांढरे जाणे असा त्रास झाला होता काय ? हांय / नाही.
- दम - लागतो / लागत नाही • छातीत दुखते / दुखत नाही. • ताप, खोकला आहे / नाही.

तपासणी निष्कर्ष (पर स्पेक्युलम व पर व्हजायनल)

- गर्भाशय साईज : नॉर्मल / बल्की
- सरव्हायकल इरोजन आहे / नाही. • सरव्हायकल डिसचार्ज - आहे / नाही. • व्हजायनायटीस आहे / नाही.

दिनांक तपासणी करणाऱ्याची सही

हुद्दा

डॉक्टरचे / वैद्यकिय अधिकाऱ्याचे / कर्मचाऱ्याचे तपासणी केल्याबाबतचे प्रमाणपत्र

प्रमाणित करण्यात येते की, श्रीमती ______ ह्या तांबी बसवून घेण्यास लागणाऱ्या योग्य वयोगटात असून त्या मानसिक व शारीरिक दृष्ट्या योग्य आहे याची मी खात्री केलेली आहे. सकृतदर्शनी त्यांचे वय ______ वर्ष आहे.

स्थळ ______ स्वाक्षरी ______

दिनांक : / / पदनाम ______

पत्ता ______

तांबी बसविल्याबाबतचे प्रमाणपत्र

श्रीमती ______ यांना दिनांक ______ रोजी ______ येथील शिबीरात / रुग्णालयात / उपकेंद्रात मी ______ वैद्यकीय अधिकारी / कर्मचारी ______ येथे मोफत तांबी बसविली आहे. बसविण्याची तारीख ______ आर - ४क्रमांक ______

स्थळ : स्वाक्षरी ______

दिनांक : / / पदनाम ______

पत्ता ______

मला तांबी बसविण्यास श्री. / श्रीमती ______ यांनी प्रवृत्त केले आहे.

दिनांक स्वाक्षरी / डाव्या हाताचा अंगठा

पुर्नभेट

अ.क्र.	भेटीचा दिनांक	त्रास असल्यास त्रासाचे स्वरूप	मासिक पाळी नियमित येते काय ?	तांबी गळून. पडली/काढली	तांबी गळून पडली/ काढली असल्यास कारण तारीख / कोणी
(१)	(२)	(३)	(४)	(५)	(६)
१					
२					
३					
४					

Screening the patient before IUD insertion

- Most of the women are good candidate for IUD.
- Pregnancy should be ruled out.
- History pertaining to signs and symptoms suggestive of PID to be elicited.
- PS and bimanual examination is must:
  - Position of uterus. (Acutely anteverted or retroverted position is most common reason for perforation)
  - Size of uterus
  - To rule out cervical or vaginal infection and any pv bleeding

- Ideal choice for a women with diabetes, specially if vascular disease is present.
- Not contraindicated in Heart diseases, patient at risk of endocarditic should be treated with prophylactic antibiotics.

Steps of IUD insertion

"no-touch" technique should be used to reduce the risk of contaminating the uterine cavity

CHECK LIST

IUD TRAY

- Bivalve speculum
- Vulsellum / „Uterine tenaculum „
- Uterine sound „
- IUD in an unopened, undamaged, sterile package that is not beyond its date of expiry.
- „Sharp Mayo scissors „
- Uterine dressing or sponge forceps
- A sterile towel
- „Bowl containing: „Antiseptic solution for cleansing cervix (chlorhexidine or povidone iodine) „
- Gauze or cotton balls

- Ensure that instruments and supplies are available and ready for use.„
- Light source should be sufficient to visualize cervix
- Ensure that the IUD package is unopened and undamaged.
- Load the IUD.
- Women should empty her bladder before the procedure.
- Dorsal lithotomy position is given.
- Asepsis steps:
  - Place a dry, clean cloth between her genital area and the surface of the examination table.
  - Wash hands thoroughly with soap and water; dry them with a clean, dry cloth or allow them to air dry.
  - „Put new/clean examination (or sterile) surgical gloves on both hands.
  - Apply a water-based antiseptic (povidone iodine - allow 1 to 2 minutes before proceeding or chlorhexidine) two or more times to the cervix and vagina before beginning the procedure.

- PS examination is done to rule out cervical, vaginal infection, PID and any pv bleeding.

- PV examination is conducted to determine the position of the uterus and assess eligibility.

- Insert a speculum into the vagina to visualise the cervix.

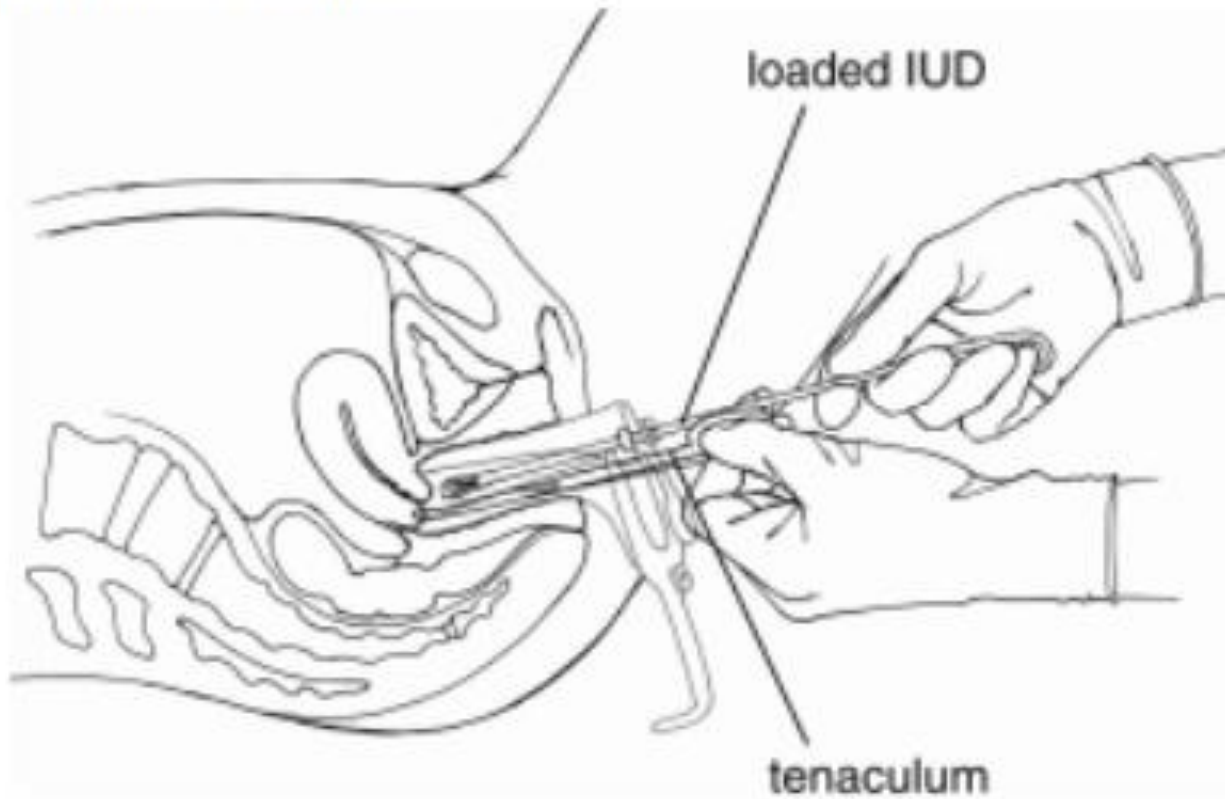
- Slowly insert the vulsellum/tenaculum through the speculum to gently hold the cervix and steady the uterus.

- Gently pass the uterine sound through the cervix to measure the uterocervical length and position of the uterus.

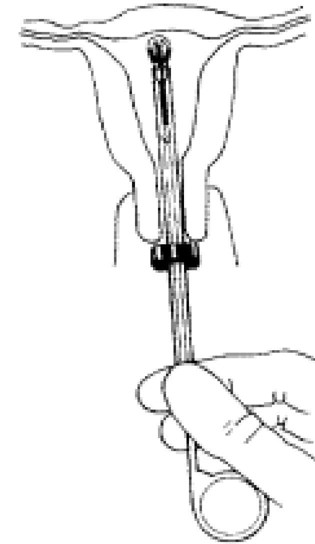
- Load the IUD into the inserter.

- Adjust the blue flange (guard) according to the UCL of uterus.

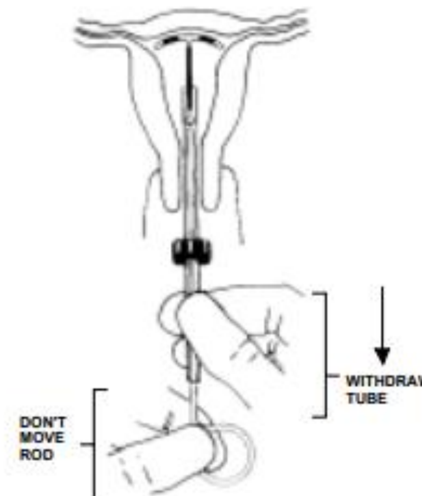
- Carefully insert the loaded IUD



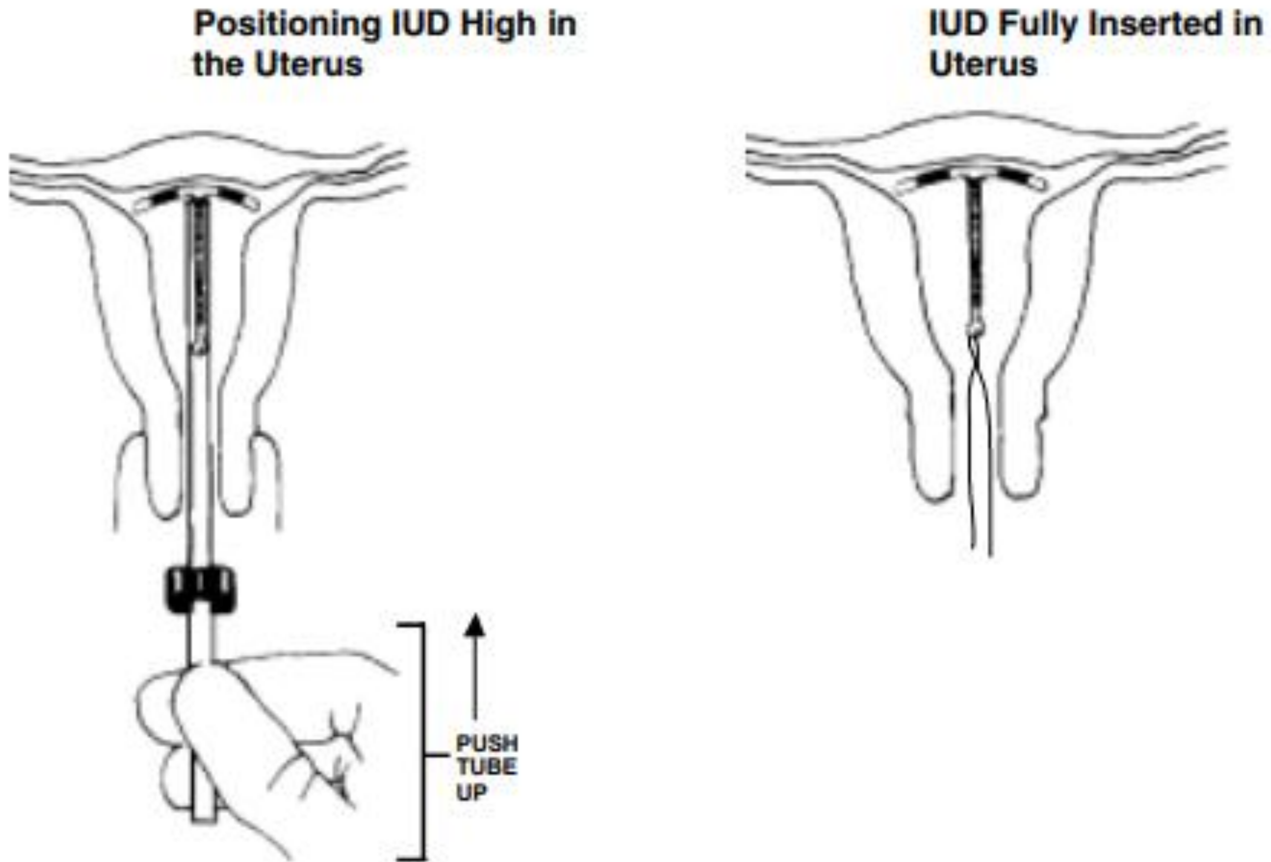
- Gently advance the loaded IUD into the uterine cavity and STOP when the blue flange comes in contact with cervix.



- Hold the vulsellum/ tenaculum and white plunger rod stationary, while partially withdrawing the insertion tube
- Remove the white plunger while holding the insertion tube stationary



- IUD is inserted by “Withdrawal technique”



- A sharp Mayo scissors is used to cut the IUD strings at 3 – 4cm.
- Gently remove the vulsellum/tenaculum and place it in 0.5% chlorine solution for 10 minutes for decontamination.
- Examine the woman's cervix for bleeding.
- Gently remove the speculum and place it in 0.5% chlorine solution for 10 minutes for decontamination.
- Reassure the woman if she has symptoms like nausea, mild to moderate lower abdominal pain and dizziness and allow her to remain on the examination table to rest until she feels better.

Advice & Follow up visit

- Advice:
  - Protection against unwanted pregnancy begins immediately after insertion.
  - Menses can be longer and heavier (except with hormonal IUDs).
  - IUDs can be spontaneously expelled.

- A follow-up visit should be scheduled 1 month post-insertion.

  This allows for the
  - exclusion of infection
  - an assessment of bleeding patterns
  - an assessment of patient and partner satisfaction
  - an opportunity to reinforce the use of condom for protection against STIs and HIV.

Contact doctor if any of the following occur:

- She cannot feel the IUD's threads.
- She or her partner can feel the lower end of the IUD.
- She thinks she is pregnant.
- She experiences persistent abdominal pain, fever, or unusual vaginal discharge.
- She feels pain or discomfort during intercourse.
- She experiences a sudden change in her menstrual periods (amenorrhea/HMB).
- She wishes to have the device removed or wishes to conceive.

Benefits

- Highly effective and economical.
- No interference with intercourse.
- Short learning curve for insertion.
- Long and locally acting.
- Easily reversible and quick return to fertility.
- Emergency contraception:
  - Efficacy is 100% when the device is inserted up to 5 days after intercourse.

Non contraceptive benefits of hormonal IUD's

- Dysmenorrhea.
- Extensively used to treat Heavy menstrual bleeding or as an alternative to hysterectomy.
- In menorrhagia from uterine fibroid.
- The local Progestin effect directed to endometrium can be utilized in patients on tamoxifen, and in women receiving estrogen therapy.
- Reduces risk of Ca endometrium.
- Improvement in symptoms of endometriosis and adenomyosis.

Side effects

- BLEEDING:
  - Irregular menstrual bleeding or an increase in the amount of bleeding are the most common side effects in the first months after the insertion.
  - (NSAIDs) or tranexamic acid may help to may help to decrease the amount of menstrual blood loss.
  - Users of LNG-IUS experience a reduction in menstrual blood loss of about 74 - 97%.

- PAIN OR DYSMENORRHEA :
  - Pain may be a physiological response to the presence of the device
  - But the possibility of infection, malposition of the device (including perforation) and pregnancy should be excluded.
  - The LNG-IUS has been associated with a decrease in menstrual pain.

- Hormonal: (LNG-IUS)

  - depression, acne, headache and breast tenderness which appear to be maximal at 3 months after insertion.

- Functional ovarian cysts

  - have been reported in 30% of LNG-IUS users.
  - resolve spontaneously hence managed expectantly.

Risks

- UTERINE PERFORATION: (Rare)
  - rate is 0.6 to 1.6 per 1000 insertion.
  - All uterine perforations, either partial or complete, are initiated at the time of IUD insertion
  - Risk factors for perforation: Postpartum insertion, an inexperienced operator, uterus that is immobile, acutely anteverted or retroverted uterus
- INFECTION
- EXPULSION:
  - First year of use (2—10% of users).
  - Risk factors for expulsion include insertion immediately postpartum, nulliparity, previous IUD expulsion (30% chance of expelling a subsequent device).
- FAILURE:
  - the possibility of ectopic pregnancy must , be excluded.
  - The risk of spontaneous abortion is increased in women who continue a pregnancy with an IUD in place.

Contraindications

- Pregnancy
- Pelvic inflammatory disease (PID) or sexually transmitted infection (STI)
- Puerperal sepsis
- Immediate post-septic abortion
- Severely distorted uterine cavity
- Unexplained vaginal bleeding
- Cervical or endometrial cancer
- Malignant trophoblastic disease
- Copper allergy (for copper IUDs)
- Breast cancer (for LNG-IUS)

Comparison of different IUD's by their pregnancy rate

DEVICE	Pregnancy rate (%)	Expulsion rate (%)	Removal rate (%)
Lippes loop	3	12-20	12 – 15
Cu-200	3	8	11
Cu- 380 A	0.5-0.8	5	14
LNG IUD	0.2	6	17
Progestasert	1.3-1.6	2.7	9.3

* Leon Speroff and Philip D Darney "A clinical guide for contraception" 3rd edition.

Troubleshooting in IUD users

- Lost strings
- Pregnancy with an IUD in place
- Amenorrhea or delayed menses
- Pain and abnormal bleeding
- Difficulty removing the IUD
- STI identified with IUD in place

Lost strings

- If an IUD user is unable to palpate the IUD strings, a speculum exam should be performed.

- If the strings are not seen in the cervical os:
  - May have been expelled
  - May have perforated the uterine wall
  - The strings may have been drawn up into the cervical canal.

- Ultrasound is the preferred method to identify the location the IUD.
  - If the device is seen within the uterus, it can be left in situ.

- If the device is not identified within the uterus or the pelvis, a plain X-ray of the abdomen should be performed to determine whether the device has perforated the uterine wall.

Pregnancy with in-situ Copper T

- Once she get pregnant, the diagnosis of an ectopic pregnancy has to be excluded.
- The IUD should be removed if possible.
- If the strings are visible, gentle traction is applied to remove the device.
- If the strings are not visible, gentle exploration of the cervical canal is performed.
- If no strings are found, the possibility of perforation must be considered and is excluded by pelvic ultrasound.

Difficulty removing the IUD

- If the strings cannot be seen
  - An uterine sound can be passed into the endometrial cavity to localize the IUD. Cervical dilation may be required. Once localized, the IUD can be subsequently grasped with a small grasping instrument directed towards it.
  - If removal is not easily performed, direct visualization with ultrasound or hysteroscopy may be required.
  - Occasionally general anesthetia may be needed to carry out IUD removal.

IUD removal

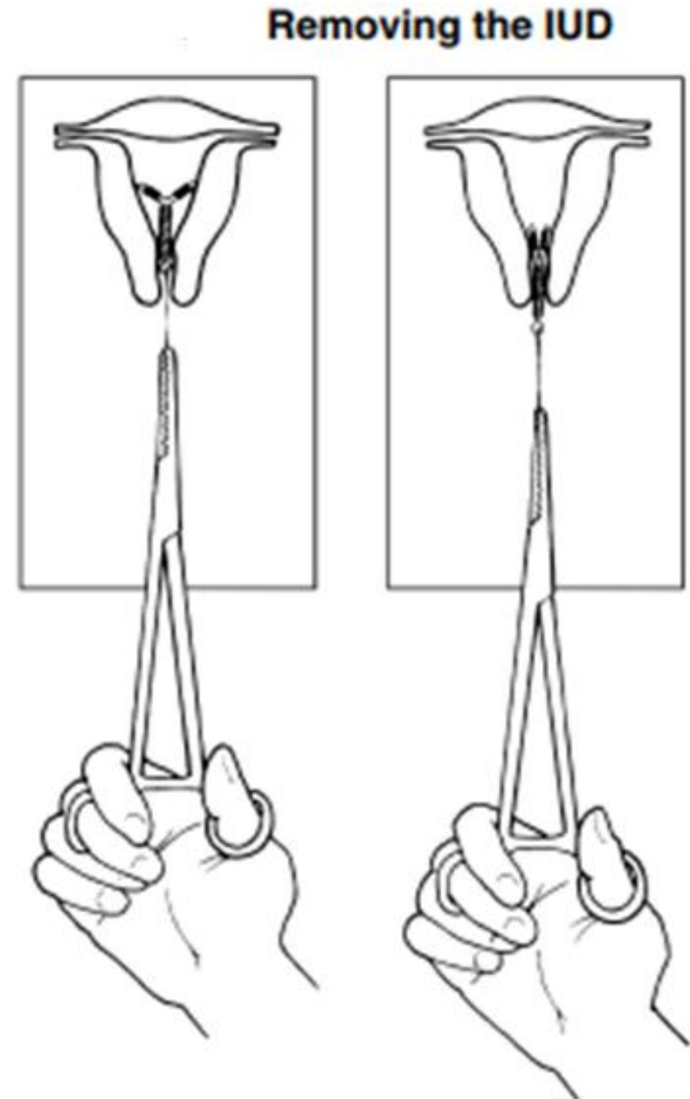
- IUD removal is usually an uncomplicated and relatively painless routine procedure.
- Reasons for IUD removal should be enquired and patient should be counseled to continue the IUD and her problems (HMB/infections) should be addressed by medications if required.
- Reasons for having the IUD removed should be enquired:
  - If she desires to plan pregnancy.
  - Woman has the right to discontinue this method anytime.
  - If she wishes to use any other method of contraception.
  - If she has some medical reasons like "HMB / pregnancy"

Steps to remove the IUD

"No-touch" technique should be used for IUD removal:

- Prepare the woman: give a brief overview of the procedure and provide reassurance as needed.
- Put new / clean examination or high level disinfected surgical gloves on both hands.
- Cleanse the cervix and vagina with an appropriate antiseptic:
  - Thoroughly apply an appropriate antiseptic (eg. Povidone iodine / Chlorhexidine) two or more times to the cervix and vagina.
- Insert a high level disinfected (or sterile) speculum and visualize the cervix and the IUD strings.
- Alert the woman immediately before you remove the IUD
  - Ask her to relax
  - Inform her that she may feel some discomfort and cramping which is normal.

- Grasp the IUD strings and apply gentle traction:
  - Grasp the strings of the IUD with a narrow artery forceps.
  - Apply gentle traction and pull the string towards you with the forceps.
  - If the strings break off and IUD is visible grasp the device with the forceps and remove it.
  - If removal is difficult, do not use excessive force.
- Show the woman the IUD
- Reassure the woman if she has symptoms like nausea, mild to moderate lower abdominal pain and dizziness and allow her to remain on the examination table to rest until she feels better.



Steps for difficult IUD removal

- If the IUD is partially removed but there is difficulty in drawing it through the cervical canal
  - Attempt a gentle, slow twisting of IUD while gently pulling it as long as the woman remains comfortable.
  - If it is still not be removed then the procedure has to be done under anaesthesia by dilating the cervix.

- If there seems to be a sharp angle between uterus and cervix
  - A gentle downward and outward traction is applied to the cervix by tenaculum on cervix and then attempt removal by gently twisting and pulling the IUD.
  - If it is still not be removed then the procedure has to be done under anaesthesia by dilating the cervix.

REFERENCES

1. 3rd edition "IUD guidelines for Family planning services"- USAID
2. Intrauterine contraceptive devices NICE guidelines 2019
3. Intrauterine Contraceptives (IUCD and IUS) – Management- NICE guidelines 2019
4. Leon Speroff and Philip D Darney "A clinical guide for contraception" 3rd edition.

THANK YOU