



Antenatal Care

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- Introduction

- New development in medicine, 1901 and ANC clinics started at 1911, Boston
- General health care given to pregnant women to promote & maintain optimal health of mother with having and rearing healthy babies
- Developed countries- 98%, Ethiopia-28%
- Meaningless unless an attended delivery
- Attended labors in Ethiopia is <10%
- Obstetric care includes preconceptional care, intrapartum care, postpartum care, prenatal care.
- Objective: to ensure a normal pregnancy with delivery of healthy baby from healthier mother

Aims of ANC

- To establish diagnosis of pregnancy and GA
- To screen high risk cases
- To deal with minor ailments of pregnancy
- To prevent or to detect & treat at the earliest any complications.
- To ensure continued medical surveillance & prophylaxis
- To educate the mother about physiology of pregnancy & labor
- To discuss with couple about delivery and care of newborn
- To motivate couple about family planning.

Scheduling of visits

- Traditional: less time(5 minutes), frequent visits(12)
 - Every 4 weeks till 28 weeks
 - Every 2 weeks 28-36 weeks
 - Every week 36 weeks till delivery
- Objective benefit of this type not assessed
- Current WHO recommendation: 4 or 5 visits.
 - 1st- upto 16 weeks
 - 2nd- 24-28 weeks
 - 3rd- at 32 weeks
 - 4th- at 36 weeks
 - 5th- 40-42 weeks- optional

Contents of ANC

- The contents of ANC are
 1. Risk assessment: APH, HTN
 2. Care provision: iron supplementation, treatment of illness
 3. Health promotion: Nutrition, place of delivery, hygiene, safe sex, etc
- Each visit of ANC requires about 20 minutes.
- ANC is effective in : anemia treatment, syphilis, and detection of hypertension.

Assessment

- Present history: Name, age, address, gravidity, parity, abortion, LNMP, Use of contraception, GA
 - symptom and sign of pregnancy
 - Quickening
 - Any complaint/concerns
 - Danger signs of pregnancy
 - planned/ wanted/ supported Vs -----
- Past history(assessment)
 - APH, PPH
 - Social history and support
 - Personal or family history of multiple gestation
 - History of medical or surgical illness
 - History of hypertension, operative deliveries

History

- A 20 years old gravida II para I whose LNMP on 1/9/02e.c and EDD on 6/6/03 e.c which makes gestational age 40wks+1 by date. She has regular menstrual cycle and no history of use of contraceptive before pregnancy. she has ANC follow up at this hospital .Currently she is presented with pushing down pain and mucus tinged vaginal bleeding of 8hrs duration. she has no history of passage of liquor. She has no history headache , blurring of vision , epigastric pain. The pregnancy is planned and supported. The previous pregnancy was a yr back & was uneventful and the out come was male neonate weighing 3.2kg. Her son is alive and healthy. She has no self or family history of HTN ,DM or mentionable health problem. Has no history of alcohol or smoking.

Past history- cont'd

- History of genital cutting
- History of STIs
- History of stillbirths, IUGR

General physical examination:

- General appearance
- vital signs
- Height and Weight
- General systemic examination
- Clinical signs of anemia
- signs of physical abuse.

Obstetric examination

- symphysis fundal height

Obstetric examination- cont'd

- Fetal lie, presentation, attitude, engagement
- Fetal growth and wellbeing
- Fetal movement
- FHT, EFW
- Special examinations: pelvic assessment, speculum examination

Laboratory Investigations

Base line:

- HCT (Hgb), Blood group & Rh
- Urine analysis
- VDRL
- Stool examination(as indicated)

Lab. Cont'd

- Laboratory on indication:
 - CBC
 - Urine/ cervical culture & sensitivity
 - Cervical / vaginal smear
 - Pregnancy test
 - Serology for HIV/ Hepatitis B virus
 - Serology for TORCHES screening
 - Oral glucose tolerance testing
 - Pap smear
 - Maternal serum alpha fetoprotein and triple screening
 - Aminocentesis

Investigations- Cont'd

- Imaging studies as indicated
 - Ultrasonography, doppler
 - X-ray, CT, MRI
- Assessment in subsequent visits:

HISTORY: revising history for

- social support
- Complaints and concerns
- Fetal kicks

Repeat physical examination:

- General appearance
- Vital signs and weight

Cont'd

- Clinical signs of anemia and physical abuse
- Examination based on complaints
- Examination of previously detected problem

Obstetric examination:

-SFH, FHT, Fetal lie and presentation

Repeat investigations:

- Hgb, U/A, OGTT, U/S on indication
- Coomb's test if Rh negative

Health promotion

- Advice given on
 - Balanced diet, avoid alcohol, drugs and smoking
 - Rest, activity, coitus
 - Minor complaints of pregnancy
 - Personal hygiene
 - Planned place of delivery
 - Transportation
 - Care of newborn, breast feeding, child spacing
 - Importance of interventions like immunisation, malaria prophylaxis, etc.
 - Danger signs and symptoms
 - Prevention of intestinal parasites

Care provision

- Minimum care provided at each visit:
 - Development of individualized birth plan
 - Discuss women's preference of place of delivery
 - Ascertain transport means
 - Provide treatment for problems and complaints
 - Provide immunization for TT, HBV, PMTCT
 - Supplementation of Fe, folate, malaria prophylaxis, treat intestinal parasites
 - Stress importance of next visit
 - Inform place in case of emergency
 - Detection & management of risk factors and complications

First ANC visit

- Aims at this visit:
 - establish diagnosis of pregnancy & GA.
 - Identify risk factor; medical & nutritional status of mother
 - Develop individualized birth plan
 - Provide health promotional services like on nutrition, danger signs, wt gain
 - Initiate prophylaxis(anemia, malaria, immunization, HIV)
 - Evaluate for chromosomal anomalies-optional
 - Vit A supplementation & iron supplementation

2nd and 3rd ANC Visit

- Screen for HTN, twin pregnancy, anemia, preterm labor, DM, Rh iso-immunisation
- Ascertain fetal growth and well being
- Develop individualized birth plan
- Continue with health promotion and care provision

The 4th ANC visit

- Screen for HTN, APH, multiple gestation
- Ascertain fetal growth, wellbeing, lie & presentation.
- Update individualized birth plan
- Strengthen health promotional services & discuss women's concern

5th ANC VISIT- Optional

- Assess fetal lie, presentation, wellbeing
- Assess Bishop's score and termination vs expectant management.
- Update birth plan

Summary

- Nutrition: 300Kcal/ day from non pregnant-2500kcal/day
- Weight gain:
 - Low BMI: 12.5-18 Kg
 - Normal BMI: 11.5-16 Kg
 - High BMI: 7-11.5 Kg
 - Obese: <7 Kg
 - Weight gain:
 - fetus=3500gm
 - Placenta, amniotic fluid, uterus=900 gm
 - interstitial fluid & blood volume=1200-1600 gm each
 - Breast= 400 gm, remaining 1640 gm is of maternal fat.
- Iron supplementation 30-60 mg daily starting in second trimester and puerperium.

References

- Current obstetric & gynecologic diagnosis and treatment- 10th edition
- William textbook of obstetrics-22nd edition
- Dutta's text book of obstetrics
- Gabbe's: normal and abnormal pregnancy