



Antenatal Care, Preconceptional Counseling and Care

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DEFINITION

- Systematic supervision (examination and advice) of a woman during pregnancy is called antenatal (prenatal) care. The supervision should be regular and periodic in nature according to the need of the individual. Actually prenatal care is the care in continuum that starts before pregnancy and ends at delivery and the postpartum period.
- Antenatal care comprises of: Careful history taking and examinations (general and obstetrical) Advice given to the pregnant woman.

AIMS AND OBJECTIVES

- The aims are:
- (1) to screen the “high risk” cases
- (2) to prevent or to detect and treat at the earliest any complication,
- (3) to ensure continued risk assessment and to provide ongoing primary preventive health care,
- (4) to educate the mother about the physiology of pregnancy and labor by demonstrations, charts and diagrams (mothercraft classes), so that fear is removed and psychology is improved.



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5) to discuss with the couple about the place, time and mode of delivery, provisionally and care of the newborn,

(6) to motivate the couple about the need of family planning and also appropriate advice to couple seeking medical termination of pregnancy.

The objective is to ensure a normal pregnancy with delivery of a healthy baby from a healthy mother

PROCEDURE AT THE FIRST VISIT

- **OBJECTIVES:** (1) To assess the health status of the mother and fetus. (2) To assess the fetal gestational age and to obtain baseline investigations. (3) To organize continued obstetric care and risk assessment.

HISTORY TAKING

- Vital statistics
- Gravida and parity
- Duration of marriage
- History collection (The obstetric history is to be summed up as: Status of gravida, parity, number of deliveries (term, preterm), miscarriage, pregnancy termination (MTP) and living issue [e.g. Mrs R.L, (P3+0+1+2) G4, P3, miscarriage 1, living 2 at 36 weeks of present pregnancy]).
- Menstrual history: Cycle, duration, amount of blood flow and first day of the last normal menstrual period (LNMP) are to be noted (spontaneous). From the LMP, the expected date of delivery (EDD) has to be calculated.

EXAMINATION

- General Physical Examination

- Systemic examination

- Breasts Examination

- Obstetrical examination :

- Abdominal: Tone of the abdominal muscles, presence of any incisional scar or presence of herniation and skin condition of the abdomen are to be looked for. Fundus of the uterus is just palpable above the symphysis pubis at 12 weeks.

- Vaginal

- Routine investigations:

- Blood: Hemoglobin, hematocrit, ABO, Rh grouping, blood glucose and VDRL are done. Serology (antibody) screening is done in selected cases.

- Urine



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➤ Special investigations:

(a) Serological tests for rubella, hepatitis B virus and HIV: antibodies to detect rubella immunity and screening for hepatitis B virus and HIV.

(b) Genetic screen: Maternal serum alpha-fetoprotein (MSAFP), triple test at 15–18 weeks for mother at risk of carrying a fetus with neural tube defects, Down's syndrome or other chromosomal anomaly.

(c) Ultrasound examination

PROCEDURE AT THE SUBSEQUENT VISITS

Generally, checkup is done at interval of 4 weeks up to 28 weeks; at interval of 2 weeks up to 36 weeks and thereafter weekly till delivery

Objectives: (A) To assess:

- (1) fetal well-being,
- (2) lie, presentation, position and number of fetuses,
- (3) anemia, preeclampsia, amniotic fluid volume and fetal growth,
- (4) to organize specialist antenatal clinics for patients with problems like cardiac disease and diabetes.

(B) To select, time for ultrasonography, amniocentesis or chorion villus biopsy when indicated.

History: To note:

(1) Appearance of any new symptom (headache, dysuria), (2) Date of quickening.

(2) Examination:

- General: In each visit, the following are checked and recorded:
(1) weight, (2) pallor, (3) edema legs, (4) blood pressure.
- Abdominal examination: Inspection: Abdominal enlargement, pregnancy marks—linea nigra, striae, surgical scars (midline or suprapubic). Palpation: (a) To note the height of the fundus above the symphysis pubis. (b) In the second trimester, to identify the fetus by external ballottement, fetal movements, palpation of fetal parts and auscultation of fetal heart sounds. (c) In the third trimester, abdominal palpation will help to identify fetal lie, presentation, position, growth pattern, volume of liquor and also any abnormality.

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- Examination also helps to detect whether the presenting part is engaged or not. Girth of abdomen is measured at the level of umbilicus. The girth increases by about 2.5 cm per week beyond 30 weeks and at term, measures about 95–100 cm. (d) Others—any uterine mass (fibroid) or tenderness. Fetal activity (movements) is also recorded.
- Vaginal examination

Ongoing assessment and counseling is important as prenatal care has an educational opportunity. The woman should be informed about the list of warning signs so that she can contact the hospital or avail the nearby health-care facilities in time (see below).

Warning Signs are: Leakage of fluid from vagina Vaginal bleeding Abdominal pain: distressing in nature

- Headache, visual changes Decrease or loss in fetal movements
- Fever, rigor, excess vomiting, diarrhea

ANTENATAL ADVICE

➤ PRINCIPLES:

- (1) To counsel the women about the importance of regular checkup.
- (2) To maintain or improve the health status of the woman to the optimum till delivery by judicious advice regarding diet, drugs and hygiene.
- (3) To improve the psychology and to remove the fear of the unknown by counseling the woman.

DIET

- The increased calorie requirement is to the extent of 300 over the nonpregnancy state during second half of pregnancy.
- The pregnancy diet ideally should be light, nutritious, easily digestible and rich in protein, minerals and vitamins.
- Dietetic advice should be given with due consideration to the socioeconomic condition, food habits and taste of the individual.
- Supplementary nutritional therapy: supplementary iron therapy is needed for all pregnant mothers from 16 weeks onwards. Above 10 g% of hemoglobin, 1 tablet of ferrous sulfate (Fersolate) containing 60 mg of elemental iron is enough. The dose should be proportionately increased with lower hemoglobin level to 2–3 tablets a day. Three tablets provide 45 mg of absorbable iron.
- supplementary vitamins are to be given daily from 20th week onwards.

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- **ANTENATAL HYGIENE:** In otherwise uncomplicated cases, the following advices are to be given:
- Rest and sleep
- Bowel
- Bathing
- Clothing
- Dental care
- Care of the breasts
- Travel
- Avoid Smoking and alcohol



IMMUNIZATION:

- ▶ Live virus vaccines (rubella, measles, mumps, varicella, yellow fever) are contraindicated. Rabies, hepatitis A and B vaccines, toxoids can be given as in nonpregnant state.
- ▶ Tetanus: Immunization against tetanus not only protects the mother but also the neonates. In unprotected women, 0.5 mL tetanus toxoid is given intramuscularly at 6 weeks interval for 2 such, the first one to be given between 16 and 24 weeks. Women who are immunized in the past, a booster dose of 0.5 mL IM is given in the last trimester.

GENERAL ADVICE

- The patient should be persuaded to attend for antenatal checkup positively on the schedule date of visit. She is instructed to report to the physician even at an early date if some untoward symptoms arise such as intense headache, disturbed sleep with restlessness, urinary troubles, epigastric pain, vomiting and scanty urination.
- She is advised to come to hospital for consideration of admission in the following circumstances:
 - Painful uterine contractions at interval of about 10 minutes or earlier and continued for at least 1 hour—suggestive of onset of labor.
 - Sudden gush of watery fluid per vaginam—suggestive of premature rupture of the membranes.
 - Active vaginal bleeding, however slight it may be.

PRECONCEPTIONAL COUNSELING AND CARE

- When a couple is seen and counseled about pregnancy, its course and outcome well before the time of actual conception is called preconceptional counseling. Objective is to ensure that a woman enters pregnancy with an optimal state of health which would be safe both for herself and the fetus.
- Preconceptual phase is the time to identify any risk factor that could potentially affect the perinatal outcome adversely. The woman is informed about the risk factor and at the same time care is provided to reduce or to eliminate the risk factor in an attempt to improve the pregnancy outcome. Virtually preconceptional counseling is a part of preventive medicine



PRECONCEPTIONAL VISIT, RISK ASSESSMENT AND EDUCATION

- Identification of high risk factors
- Base level health status
- Rubella and hepatitis immunization
- Folic acid supplementation
- Maternal health is optimized preconceptionally
- Fear of the incoming pregnancy
- Patient with medical complications
- Drugs used before pregnancy
- Woman should be urged to stop smoking, taking alcohol and abusing drugs. Addicted woman is given specialized care.

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- Inheritable genetic diseases
- Importance of prenatal diagnosis
- Inheritable genetic diseases could be managed either by primary prevention (eliminating the causal factor) or by secondary prevention (terminating the affected fetus).
- Couples with history of recurrent fetal loss
- Educational classes include discussion as regard delivery, timing, method and possible interventions (ventouse/forceps or cesarean delivery). Such prenatal classes are found helpful and valuable. The counseling should be done by primary health-care providers. The help of an obstetrician, physician and geneticist may be required and should be extended.

CHECK YOUR KNOWLEDGE

- Prenatal diagnosis at 16 weeks of pregnancy can be performed using all of the following, except:
 - A. Amniotic fluid
 - B. Maternal blood
 - C. Chorionic villi
 - D. Fetal blood
- Correct answer : D. Fetal blood
- Fetal blood sampling is done by cordocentesis. It is done in the 18-24 weeks gestational age.



THANK

YOU