Oligohydramnios & polyhydramnios
· Amniotic fluid is produced almost exclusively from fetal urine from the second trimester onwards. It serves a vital function in protecting the developing baby from pressure or trauma, allowing limb movement, hence normal postural development, and permitting the fetal lungs to expand and develop through breathing.
Polyhydramnios

- 0.5-1.5% of all pregnancies.
- Excess of liquor amnii > 2000 ml (average liquor volume at term 800 ml (400-1500 ml)).
2 types:

1. Acute polyhydramnios: <30 weeks and fluid accumulates quickly (uniovular twin).

2. Chronic polyhydramnios: > 30 weeks and excess fluid accumulates gradually.
Causes:-

- A- Maternal:
  - 1. D.M (badly controlled D.M),
  - 2. Rh isoimmunization
B- Fetal:

1. Multiple pregnancy (in monochorionic twin it may be due to twin-twin transfusion syndrome).

2. Congenital abn. of CNS: NTD such as anencephaly, spina bifida (fetus does not swallow normally).

3. Congenital abn. of GIT: oesophageal atresia, trachea-esophageal fistula, duodenal atresia (inability to swallow).

4. Neuromuscular fetal condition (preventing swallowing).
C- Placental:

1. chorioangioma of placenta.
2. Arterio-venous fistula.

D- Idiopathic (most cases 65%).
Diagnosis:

1. usually clinical diagnosis: uterine size larger than expected for gestational age, difficulty in defining fetal parts and faded fetal heart tones.

2. U/S diagnosis: finding a pocket of fluid measuring > 8 cm or more in vertical diameter; or AFI >25 cm.
Complications:

- Increase fetal and maternal morbidity and mortality.
- 1. Half of cases of polyhy. Associated with fetal anomalies.
- 2. Preterm labour and PROM.
• 4. Fetal malpresentation.
• 5. Intrapartum complications (cord prolapsed, abruptio placentae).
• 6. ↑ risk of PPH (due to overdistended uterus).
Investigations:

1. lab. (Antibody screen, DM screen, TORCH serology),

2. U/S (cong. Abn. ½ cases).
Treatment:

• Prevention: improved control in DM may ↓ prevalence of polyhy.


• 2. Indication of termination (induction of labour):
  • A- gross fetal abn.
  • B- patient near term & patient in serious discomfort.
3. Abdominal amniocentesis: suitable if the pregnancy not sufficiently advanced for safe induction & patient is in discomfort & there is no evidence of fetal abn.

After localization of placenta with u/s an epidural needle is inserted into the amniotic sac & the fluid is withdrawn up to 2 litters may be removed provided withdrawn slowly (usually not more than 500 ml/30 min).

The procedure may be repeated if necessary.
Recently PG inhibitors; indomethacin effective in ↓ the amount of A.F act by ↓ the fetal urinary output or by ↑ ing the reabsorption of fluid via the lungs.

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Oligohydramnios

- 4% of all pregnancies.
- Defines as absence of amniotic fluid pocket, or one measuring < 2 cm in vertical diameter. AFI < 5 cm.
Causes:

1. postterm pregnancy.
2. PROM.
3. Fetal renal abn. (renal agenesis, urethral obs.).
4. Non-renal fetal abn. (thyroid gland agenesis, skeletal dysplasia)
5. IUGR.
6. Leaking fluid following amniocentesis or C.V.S.
Diagnosis:

- 1. History & physical examination for the DD.
- 2. u/s.
Complications:

1. Pulmonary hypoplasia, occur frequently in fetuses deprived of A.F for several weeks.
2. Deformities of limbs such as talipes & ankylosis of joints may be caused by pressure.
3. Amniotic adhesions, may form bands which can constrict the limbs or even amputation of limbs.
Prognosis:

- For oligohyd. In second trimester is poor because the two most common causes PROM and cong. Abn. , no successful treatment.
Treatment:

- According to the cause.
- The option of termination of pregnancy:-
  1. patient with lethal fetal abn.
  2. PROM < 20 weeks.
• Patient with severe IUGR, the best potion probably is delivery. However, expectant management with intensive fetal monitoring may be option depending on the gestational age.