Management of Oligohydramnios

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1. Definition

Oligohydramnios refers to amniotic fluid volume (liquor volume (LV)) that is less than expected for gestational age. It occurs in 0.5% - 1% of pregnancies, and in 5% of pregnancies at term. The diagnosis is usually made subjectively. Oligohydramnios is defined as a single deepest vertical pool (DVP) of 2 cm or less. It may also be described using the amniotic fluid index (AFI) of 50mm or less.

2. Background

Oligohydramnios is caused by a reduction in production of fetal urine due to placental insufficiency, fetal renal anomalies or obstruction of urine flow; or because the urine that is produced, drains away due to ruptured amniotic membranes.

Anhydramnios is a condition where there is no amniotic fluid seen. This results in marked fetal deformation due to compression effects.

3. Causes

Oligohydramnios can be idiopathic and may be benign, however, other causes are associated with a reduced amniotic fluid volume. Adequate management of oligohydramnios will need careful consideration to rule out important causes. Some important conditions related to oligohydramnios are listed below.

Maternal

- Medical conditions that cause utero-placental insufficiency (e.g., preeclampsia, chronic hypertension, collagen vascular disease, nephropathy, thrombophilia)
- Medication: ACE inhibitors, Prostaglandin synthetase inhibitors

Fetal

- Chromosomal abnormalities
- Congenital abnormalities, especially those associated with impaired urine production e.g. renal agenesis
- Growth restriction
- Fetal demise
- Post term pregnancy
- Ruptured fetal membranes
- Placental
- Twin to twin transfusion (i.e., twin polyhydramnios-oligohydramnios sequence)
- Placental thrombosis or infarction

4. Diagnosis:

In ABMU the DVP or AFI is reported for singleton pregnancies.

- Oligohydramnios: DVP <2cm or AFI <50mm
- Borderline oligohydramnios (Where AFI reported instead of DVP): AFI is above 50mm but below 5th percentile SEE GRAPH.

5. Management (above 20 weeks)

Initial assessment

- Take history to exclude premature rupture of membranes. A sterile speculum examination may be necessary.
- Fetal growth restriction may present with reduced LV, therefore assess for fetal growth using GAP grow. If the estimated fetal weight (EFW) is at/or less than the 10th percentile, an umbilical artery doppler is indicated if not yet done.
- Arrange a fetal anomaly scan if not yet done. This is important to rule out fetal renal pathology.

5.1 Management of isolated oligohydramnios at term

5.1.1. Borderline (AFI above 50mm but below 5th percentile – see chart)

- USS for EFW, LV, Umbilical artery Doppler every 2 weeks if stable.
- Ask patient to report any change in fetal movements. CTG indicated if altered movements.

5.1.2. DVP <2cm or AFI < 50mm at 37 weeks

- Induction of labour should be considered. If not acceptable by the patient, after counselling, organise scans every week for LV and Umbilical artery Dopplers, and twice weekly CTG.
- Steroid should be considered if caesarean delivery is planned at less than 39 weeks.
- Ask patient to report any change in fetal movements. CTG indicated if altered movements.

5.2 Management of preterm oligohydramnios

5.2.1 Preterm Oligohydramnios DVP <2cm or AFI <50mm

- Consider other causes e.g. PPROM and manage appropriately.
- Seek senior/consultant advice, especially in anhydramnios.
- For conservative management scan weekly for LV and Doppler, with EFW every 2 weeks.
- CTG twice a week advised, or if the patient reports altered fetal movements.
- Steroids are recommended for fetal lung maturity if delivery is planned or anticipated within one week and gestation less than 36 weeks.

5.2.2 Preterm Borderline Oligohydramnios

- 2 Weekly scans for EFW, LV and Umbilical artery Dopplers until LV normalises or until decision to induce at term.
- The woman should be advised to report any concerns regarding fetal movements.

5.3 Management of oligohydramnios in the Small for Gestational Age fetus (SGA)

- IUGR should be managed in accordance with the IUGR policy.

6. Timing of delivery

Induction of labour should be offered between 37-38 weeks where oligohydramnios is identified, and considered beyond 38/40 for isolated borderline oligohydramnios (An audit in our unit has shown no increase in adverse outcomes for these pregnancies).

If not acceptable by the patient, she should be counselled and fetal surveillance arranged for scans and/or CTGs should be individualised according to risk assessment by the obstetrician.

7. Labour

A patient with isolated oligohydramnios, without other complications or IUGR, in spontaneous labour at term, and a normal admission CTG, may have intermittent auscultation after discussion and agreement with the obstetrician otherwise, continuous fetal monitoring by CTG is indicated.

8. Auditable Standards

Proportion of women offered induction of labour < 37 weeks

References:

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Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

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Brief outline giving reasons for document being submitted for ratification	Update of expired guideline
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