Management of Polyhydramnios

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Approved by: Antenatal Forum

Approval Date: January 2019

Review Date: January 2022

Document No:

Contents

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1. Aims and Objectives

The aim of this guideline is to guide clinicians regarding the evidence based antenatal management of women with singleton pregnancies who have been diagnosed with polyhydramnios.

2. Background and Definition

Polyhydramnios is defined as excessive accumulation of amniotic fluid based on ultrasound evidence of a constant value of AFI ≥25 cm or DVP ≥ 8 cm across all gestational ages. The reported incidence of this condition is between 0.2 and 3.9%.[1] Clinical suspicion is based on rapidly increasing symphysis fundal height measurements, above the 90th centile on customised growth charts.

Polyhydramnios has been associated with a variety of adverse pregnancy outcomes including preterm premature rupture of membranes (PPROM), preterm Birth (PTB), cord prolapse and admission to neonatal unit. Maternal complications include increased risk of postpartum haemorrhage (PPH) and lower segment caesarean section (LSCS) Perinatal morbidity and mortality is higher if polyhydramnios develop at earlier gestation.

3. Aetiology

A wide variety of maternal, fetal and placental conditions are associated with polyhydramnios.

Maternal

Uncontrolled diabetes mellitus (pre-gestational and gestational), Rhesus and other blood group isoimmunisation leading to immune hydrops and rarely drug exposure, such as lithium leading to fetal diabetes insipidus.

Fetal

Structural malformations such as trachea oesophageal fistula, oesophageal atresia, duodenal and intestinal atresia, Chromosomal and genetic abnormalities, e.g. trisomies, Beckwith–Wiedemann syndrome, fetal akinesia dyskinesia syndrome, congenital infections, e.g. toxoplasma, rubella, cytomegalovirus, and parvovirus, Macrosomia and Fetal tumours, e.g. teratomas, nephromas, neuroblastoma, and Haemangioma. (Beloosesky et al, 2017)

Placental

Tumours such as chorioangiomas and metastatic neuroblastoma.

Unexplained (50_60%)

Unexplained Polyhydramnios refers to those cases where no maternal, placental or Fetal cause. It is a diagnosis of exclusion.

4. Classification and Diagnosis

Although gestational-age-specific thresholds can be applied to define polyhydramnios, generally speaking, a constant value of AFI ≥25 cm or DVP ≥8 cm can be used across all gestational ages.

Mild Polyhydramnios (seen in 80%)
Single deepest pocket measuring between 8 and 11cms in vertical dimension or AFI between 25.0-29.9 cm.

Moderate Polyhydramnios (seen in 15%)
Single deepest pocket measuring between 12 and 15cms in vertical dimension or AFI between 30-34.9 cms

Severe Polyhydramnios (seen in 5%)
Single deepest pool >16cms or AFI >35cms

Clinical classification (based on rapidity of onset)
Chronic: Insidious onset over a few weeks
Acute: Sudden onset within days

5. Management

5.1 Investigations

- GTT unless recently undertaken
- Maternal blood-group status for any atypical red cell antibodies should be checked
- Do not perform infection screens unless indicated by history or by identification of ultrasound markers of infection other than polyhydramnios. In the presence of fetal hydrops or known exposure the patient should be tested for parvovirus B19
- Karyotyping should be considered as advised by fetal medicine specialist

5.2 Commitments and Responsibilities

Midwives

- To transfer care of all women with diagnosed polyhydramnios to consultant led care
- To give advice to women diagnosed with polyhydramnios regarding the small risk of cord prolapse if the membranes rupture, and increased risk of premature labour.
- In triage, to invite women in for assessment if they give a history of preterm rupture of membranes or preterm labour
- Prior to delivery of the baby, to contact the neonatal team and make them aware of the birth of a baby who had polyhydramnios during pregnancy
- To alert neonatologists of case of feeding difficulties for baby

Obstetricians

- Enquire whether they are symptomatic e.g. have regular tightenings, pains or shortness of breath.

- Examination of abdomen to assess severity of polyhydramnios and relation of presenting part
- To communicate the results of the ultrasound scan to the patient and what it could mean for them and their baby.
- To communicate the risks associated with polyhydramnios. These include a small risk of cord prolapse, preterm rupture of membranes, placental abruption, preterm labour and PPH. Advise them to contact triage/ADAU immediately in case of concerns.
- Ensure these conversations are documented in patient's handheld notes.
- To arrange appropriate follow up with ultrasound scans – growth, LV and Doppler every two weeks (except for severe cases where weekly LV may be appropriate).
- To arrange appropriate investigations
- Information to be shared with neonatologists antenataly

Sonographers

- To undertake accurate measurement of liquor volume at each scan appointment and write a report documenting AFI and maximum vertical pool of liquor
- On diagnosis of polyhydramnios a detailed scan should be performed, with focus on stomach, bowel, kidneys, spine and heart due to the association with VACTERAL anomalies (vertebral defects, anal atresia, cardiac defects, tracheo-esophageal fistula, renal anomalies, and limb abnormalities). If there are any concerns that anomalies co-exist or the growth is < 10th centile in the presence of polyhydramnios, a referral should be made to the fetal medicine consultant for further management.

Indications for referral to fetal medicine consultant

- Suspected fetal anomaly
- Small for gestational age
- Concerns with fetal movement and rapid onset of polyhydramnios (could indicate muscular dystrophy)
- severe polyhydramnios

Neonatologist

- Neonatologist should be informed regarding admission of mother to delivery unit.
- Inform a senior neonatologist regarding the delivery of baby and obtain their advice on management prior to first feed, irrespective of the severity or cause of polyhydramnios. The decision for considering nasogastric tube prior to first feed to check the patency of upper GIT, will be individualised and as advised by a senior neonatologist.
- Baby should have a detailed examination after delivery by neonatologist.

6. Continuing management

There is no quality data to guide timing of delivery for idiopathic polyhydramnios. Therefore care should be individualised. Factors to consider include severity of the polyhydramnios, maternal symptoms, fetal size, lie and stability and previous obstetric history.

In labour be alertful of signs of labour dystocia if associated with macrosomia, shoulder dystocia and post-partum haemorrhage

References

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Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Management of Polyhydramnios
Name(s) of Author:	Dr Farhat Thaheem Dr Manju Nair Dr Louise-Emma Shaw
Chair of Group or Committee approving submission:	Antenatal Forum
Brief outline giving reasons for document being submitted for ratification	New policy
Details of persons included in consultation process:	Antenatal Forum
Name of Pharmacist (mandatory if drugs involved):	n/a
Issue / Version No:	V1
Please list any policies/guidelines this document will supercede:	n/a
Date approved by Group:	11 January 2019
Next Review / Guideline Expiry:	January 2022
Please indicate key words you wish to be linked to document	Polyhydramnios, Amniotic, fluid, Karyotyping
File Name: Used to locate where file is stores on hard drive	