

OP14.04

Vasa previa: is there a role for cervical length measurement?
Review of cases of antenatal management

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Objectives: The limited data regarding best management for patients with vasa previa provides a challenge. The current case review was undertaken to examine the role of serial cervical length evaluation in the surveillance of these patients.

Methods: This was a retrospective study of cases of vasa previa diagnosed in our obstetric ultrasound database in the past 3 years. Data regarding diagnosis, antenatal course and obstetric outcomes was collected.

Results: 13 cases were reported between 2007 and 2010. Antenatal information was available in 13 patients with outcome data for the 9 patients delivering at our institution. 5/13 (38.5%) were nulliparous. 9/13 (69.2%) cases were singleton gestations and 4/13 (30.8%) multiple pregnancies. None of the patients had a previous history of preterm birth. Median gestational age at diagnosis was 18 weeks (range 12–31 weeks). 7/13 (53.8%) of the patients were diagnosed at the first US examination. Serial monitoring of cervical length was performed in the 9 cases followed at our center at variable intervals. One patient with an initial cervical length > 25 mm subsequently had a short cervix at 20 wks (17 mm). She underwent cerclage placement, then presented in preterm labor and delivered by Cesarean section at 24 weeks. Other patient admitted at 33 weeks for cervical shortening, delivered 2 days later. 3/9 (33.3%) of patients were delivered at 34 wks and 3/9 (33.3%) at 35 wks by elective Cesarean section. Bethametasone for fetal lung maturity was given in 7/9 (77.8%) of the cases.

Conclusions: Vasa previa was not always recognized at the time of the first ultrasound, but diagnosis occurred in patients undergoing follow up examinations in 46% of cases. Serial measurements of the cervical length in vasa previa patients may help to identify those at risk of preterm birth that would benefit from inpatient care or earlier delivery. Further studies are needed to assess the optimal role of serial assessment of cervical length in antenatal management.

OP14.05

Evaluation of prognostic factors in pregnancies complicated by idiopathic polyhydramnios

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Objectives: Polyhydramnios complicates 1–2% of pregnancies and may be associated with adverse pregnancy outcomes. This study aimed to assess whether maximal amniotic fluid index (AFI) or gestational age (GA) at diagnosis have prognostic value in cases of idiopathic polyhydramnios.

Methods: This was a retrospective study of 524 singleton pregnancies with polyhydramnios (AFI ≥ 25 cm or MVP ≥ 8 cm) delivered in our institution from 2003 to 2008. Of these, 253 (48%) were defined as idiopathic after excluding cases of maternal diabetes, isoimmunization, hydrops, and fetal structural malformations. Outcomes were compared between those with a maximal AFI of < 30 and ≥ 30 , and between those diagnosed with polyhydramnios at < 34 and ≥ 34 wk. Statistical analyses were done using Student's *t*-test and Fisher's exact test.

Results: See Table 1.

Conclusions: Idiopathic polyhydramnios appears to be associated with a high rate of Cesarean delivery and 1% risk of IUFD. Although there is no significantly increased risk of adverse outcomes among patients with a maximal AFI of ≥ 30 , a diagnosis of polyhydramnios prior to 34 weeks is associated with increased incidence of delivery prior to 37 weeks and low birth weight.

OP14.06

Characteristics of the pelvic floor during pregnancy by three-dimensional ultrasound

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Objectives: The aim of this study was to evaluate morphological characteristics of the pelvic floor in pregnant women using 2 and 3D-transperineal ultrasound and compare with those in non-pregnant women.

Methods: In this case-control study, 40 nulliparous pregnant women in the third trimester and 28 nulliparous non-pregnant women (age-matched) were included. 2 and 3D-transperineal ultrasound were carried out with semi-reclining position after voiding at rest and during valsalva maneuver. Various biometric parameters related to characteristics of the pelvic floor were measured.

Results: Satisfactory biometric measurements could be obtained in all cases. The mean thickness of the levator ani muscle was significantly higher in pregnant women than in non-pregnant women ($P < 0.05$). Otherwise, the mean levator hiatus angle and transverse diameter of levator hiatus were significantly lower in pregnant women than in non-pregnant women ($P < 0.05$). The anteroposterior diameter of levator hiatus was not different between pregnant women and non-pregnant women.

Conclusions: Pregnant women had a significantly higher thickness of the levator ani muscle but a smaller hiatal area measured by levator hiatus angle and transverse diameter than did non-pregnant women. Pregnancy itself might cause morphological changes of pelvic floor to support the birth canal by closing the lower end of the pelvic cavity as diaphragm. Further studies are needed to evaluate morphologic changes of the pelvic floor after delivery by 2 and 3D-transperineal ultrasound.

OP14.05: Table 1. Impacts of maximal AFI and GA at diagnosis on outcomes of pregnancies complicated by idiopathic polyhydramnios

	Overall	AFI < 30 (n = 203)	AFI ≥ 30 (n = 50)	<i>p</i>	Diagnosis < 34 wk (n = 100)	Diagnosis ≥ 34 wk (n = 153)	<i>p</i>
Maternal age	31.8	31.6	32.3	NS	31.8	31.7	NS
GA at diagnosis (wk)	34 1/7	34 2/7	34	NS	N/A	N/A	N/A
Average maximal AFI	27.8	N/A	N/A	N/A	28.1	27.7	NS
OUTCOME							
GA at delivery (wk)	38 6/7	39	38 2/7	0.044	38 1/7	39 3/7	< 0.0001
Delivery < 37 wk	24 (9.5%)	17 (8.4%)	7 (14%)	NS	18 (18%)	6 (3.9%)	0.0003
Delivery < 34 wk	6 (2.4%)	4 (2%)	2 (4%)	NS	N/A	N/A	N/A
Mean birth weight (gr)	3556	3545	3607	NS	3328	3712	< 0.0001
Low birth weight (< 2500 gr) (n = 217)	9 (4.1%)	6/179 (3.4%)	3/38 (7.9%)	NS	9/88 (10.2%)	0/129 (0%)	0.0002
Cesarean delivery	140 (55%)	112 (55.2%)	28 (56%)	NS	54 (54%)	86 (56%)	NS
5 minute Apgar < 7 (n = 212)	3 (1.4%)	1/170 (0.6%)	2/42 (4.8%)	NS	2/86 (2.3%)	1/126 (0.8%)	NS
IUFD	3 (1.2%)	1 (0.5%)	2 (4%)	NS	2 (2%)	1 (0.7%)	NS