Amniotic fluid index and perinatal outcome
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Objective
To evaluate the association between the increased amniotic fluid index (AFI) and perinatal outcome.

Methods
This was a retrospective study of 152 singleton pregnancies diagnosed with polyhydramnios and delivered in our clinic between 2003 and 2014. Polyhydramnios was defined as either AFI ≥25 cm or a maximum vertical pocket (MVP) ≥8 cm even in the presence of AFI <25 cm. For each patient the following data were collected: maternal age, presence or absence of maternal diabetes (pre-existing or gestational), pregnancy outcome, gestational age at delivery, presence of prenatally detected fetal anomalies, estimated fetal weight <10th percentile for a given gestational age, fetal karyotype, mode of delivery and birth weight, Apgar scores and neonatal outcome. The perinatal outcome was determined as adverse by prenatally diagnosed congenital anomalies, fetal aneuploidy, preterm delivery, cesarean delivery, low birth weight, 5min Apgar score <7 and perinatal mortality.

Results
Over the 12-year study period, a cohort of 152 cases was identified. During this period there were 7223 singleton deliveries at our institution, for an overall incidence of polyhydramnios of 2.1%. The mean maternal age at the time of delivery was 31.6±6.65 (range, 17–45) years. Diabetes, gestational or pre-existing, was present in 26.1% of women with increased AFI. Almost 69.7% (106/152) of our cohort had mild polyhydramnios. Higher AFI was associated with an increased frequency of adverse pregnancy outcomes. The most severe form of polyhydramnios, as based on the maximal AFI (≥35 cm; n=33), was associated with the highest rates of prenatally diagnosed congenital cardiac anomalies, followed by anomalies of the thorax and lungs, gastrointestinal system, musculoskeletal system, central nervous system and genitourinary system (79%), preterm delivery (46%), small for gestational age (SGA) neonate (16%), aneuploidy (13%) and perinatal mortality (27%). No association between degree of polyhydramnios and adverse outcome was demonstrated in cases of idiopathic polyhydramnios (n=74).

Conclusion
There is an association between the severity of polyhydramnios (as reflected in the maximal AFI) and the frequency of adverse outcomes including prematurity, SGA, low 5-min Apgar score, prenatally diagnosed congenital anomalies and perinatal mortality.