

Outcomes of bilateral obstructive uropathy and unilateral hydronephrosis

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Objective

Comparative study of the effects of fetal therapy in two groups: bilateral obstructive uropathy and unilateral hydronephrosis. Prognostic factors, type of prenatal intervention, postnatal condition, antenatal urinary tract dilation and renal function depending on the type of urinary tract defect were analyzed. Furthermore effects of the fetal therapy depending on prognostic factors were compared.

Methods

Retrospective study was carried out on the total of 14 pregnancy cases with urinary tract defect, which were hospitalized in 2012 in Polish Mother's Memorial Hospital, Lodz, Poland, and then gave birth in this hospital. Ten cases of bilateral obstructive uropathy and 4 cases of unilateral hydronephrosis were qualified for comparative analysis. Three coefficients were taken into consideration when assigning cases to groups of good or bad prognosis: amniotic fluid index, time of the diagnosis and biochemical analysis of fetal urine. According to these coefficients, cases were given a prognostic rating. Cases with 3 or 2 positive values of coefficients were given a good prognostic rating.

Results

Overall, the average gestation at delivery was 35.5 weeks (34.7 for the uropathy group and 37.8 for the hydronephrosis group). In the group of good prognosis the average gestation at delivery was 37 weeks whereas in the group with bad prognosis it was 29.0 weeks. Average apgar score was 8 in the uropathy group and 8 in the hydronephrosis group; 8 in the group of good prognosis and 5 in the group of bad prognosis. Average birth weight was 2827g (3153g in the group of good prognosis, 1633 in the group of bad prognosis). 79% of the cases resulted to a live births and 21% resulted to neonatal deaths. The blood levels of urea and creatinine were normal. Slight dilation of the urinary tract was observed.

Conclusion

The group of unilateral hydronephrosis in our study is characterized by longer pregnancy duration, higher Apgar score, higher birth weight, better survivability chance. It is however important to notice that fetal therapy improved survivability chance in both groups. Independently from type of pathology, patients with better prognostic parameters after procedures had significantly longer pregnancy duration, higher Apgar score and higher birth weight. Duration of pregnancy among patients with unilateral hydronephrosis was longer (both total duration of pregnancy, as well as time from in utero procedure to birth). Infants were born in better condition (higher birth weight and Apgar score).