

Clinical Analysis of In-utero Fetal Shunt Operation : Five-year Experience at Asan Medical Center

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Objectives : To evaluate the clinical outcomes of fetal shunt operations at AMC

Methods : We reviewed the medical records of 31 occasions in 28 pregnancies who underwent intrauterine shunt operations between December, 1998 and April, 2004. Fetal shunt operations were considered in cases of unilateral or bilateral hydrothorax, CCAM type I, lower urinary tract obstruction, severe Hydronephrosis with compression effect, severe fetal ascites with compression effect. Selection criteria of fetus for shunt operation required normal karyotype, negative fetal viral infection. We used Double-basket catheter for shunting.

Results : Comparison of clinical finding, perinatal outcome after shunt operation

	CCAM type I (N=3)	Hydrothorax (N=7)	Lower UT obstruction (N=6)	hydronephrosis (N=7)	Ascites (N=5)
Gestational age * at Diagnosis (weeks)	25.6 ± 4.0 ^a	26.7 ± 3.3 ^b	18.5 ± 3.7 ^{a,b,c,d}	25.3 ± 5.3 ^c	29.6 ± 3.9 ^d
Gestational age at * shunt operation (weeks)	26.0 ± 4.4 ^e	27.3 ± 3.3 ^f	19.6 ± 3.5 ^{e,f,g,h}	27.4 ± 5.3 ^g	29.9 ± 3.8 ^h
Drain duration after * shunt operation (day)	44.2 ± 40.6 ⁱ	25.9 ± 28.8 ^j	96.0 ± 46.9 ^{i,j,k,l}	43.7 ± 36.7 ^k	28.6 ± 20.8 ^l
Gestational age at delivery (weeks) *	36.6 ± 3.9	34.9 ± 3.0	34.5 ± 2.9	36.9 ± 2.2	34.1 ± 3.0
Perinatal survival rate (%)	66.7 (2/3)	80.0 (4/5)	80.0 (4/5)	83.3 (5/6)	100.0 (5/5)

a,b,c,d,e,f,g,h,i,j,k,l p<0.05 Kruskal-Wallis Test * mean ± standard deviation ,

Conclusions : The lower urinary tract obstruction group diagnosed earlier than the other group. Vesicoamniotic shunts carried out earlier and had a longer duration than the other shunts. In-utero fetal shunt operations resulted in a prolongation of pregnancy

into the 3rd trimester