Joseph

How do you account for bladder changes through growth and tethering?

Bauer ’84 discussed the importance of UDS monitoring and the changing pattern of neurourology over the first 5 years. Several papers below highlight the use of UDS but data is retrospective and should primarily be considered opinion. UDS seems to be the foundation for proactive care. Hopefully the CDC newborn protocol will provide the concrete evidence needed to support universal use.

Proactive CIC/antimuscarinics does it help?

The foundation of proactive treatment. Few papers address expectant management. (Hopps/Kropp; Teichman et al). The proactive papers are all retrospective except Edelstein but this wasn’t a randomized study and question bias on selection. Bottom line, there is soft suggesting evidence that proactive treatment can reduce upper tract deterioration and the need for urologic reconstructive surgery (augmentation).

References


38 patients ’07-’10 asymptomatic tethered cord. Retrospective to determine how UDS impacts treatment of tethered cord. 31% had normal findings, 21 still went on to treatment. Asymptomatic tethered cord, UDS does not appear to be an influence on treatment. Likely local personal preference, not helpful for guidelines.


Editorial Review, opinion. Need for baseline UDS in order to be able to current change.


Retrospective review 272 children Loss of cortex 41% of high grade VUR, 2% on nonVUR. High grade VUR, females two associated risk factors.


Retrospective review of 144 children. 69 DSD, 27 VUR, 6 renal scars. Early treatment (CIC meds) is protective.


Nonrandomized prospective study, at risk pts (based on DSD, compliance) either started on management or observed. 44 at risk, 35 observed—had deterioration, only 3 of 20 who were treated did

Expectant treatment: 84 < 6 months UC/renal ULS Hydro/retention high risk results in UDS. Low risk continued observation. 18 high risk “majority” treated with CIC. 65 in low risk, 29 converted to high risk at age of 3 yrs. Renal deterioration occurred in only 2.


Early vs late treatment of poor compliance DSD on need for augmentation. 45 pts total 18 treated at time of noted adverse changes, 27 expectantly. Expectant group twice as likely to have need for augmentation.


Retrospective review of 130 pts 25(19%) upper tract deterioration, 21 VUR. Overall resolution of changes once treatment (CIC, meds) started, 92%


90 patients, 2-25 years, imaging and UDS. Reviewed upper tract changes and improvement. Found UDS parameters LPP, DSD, poor compliance, associated with upper tract changes. Girls higher rate of VUR, parenchymal loss. Retrospective.


Expectant treatment, “aggressive observation” Screen at birth follow Q3-6 months ULS, UC, Creatinine. Cystography, UDS only if abnormal change. CIC started only at that time. Renal deterioration 5% and not effected by abnormal UDS.


Assessment of pro-active CIC on upper tract (DMSA) 100 patients ’07-’11 all had DMSA, UDS, ULS. Cortical loss in 43% of all. CIC started at birth in 17. CIC may not protect from upper tract changes. Retrospective review.


Retrospective review of patients thought to be at risk started on CIC Compared 46 pts started on CIC at birth to 52 started after the age of 4. Looked at UTI, Hyrdornephrosis, VUR, continence and need for surgery. Renal outcome similar in both groups, less surgery (augmentations) in the newborn CIC.

This paper set the foundation for the proactive care, the benefit of UDS and the changing pattern through the first several years of life.

Snow DC, Yerkes EB, Cheng EY: Update on Urological Management of Spina Bifida from Prenatal Diagnosis to Adulthood JUROL 194:288-296 2015

Best current summary regarding contemporary urologic care. Bottom line, all of our practice is “Best Practice”, common sense, and opinion.


Looks at risk factors resulting in upper tract deterioration. 41 children ’93-’03 Found high baseline pressure > 30 was associated with upper tract risk. Retrospective assessment