

DOWNLOAD PDF REPORT ON THE MANAGEMENT OF PRIMARY VESICoureTERAL REFLUX IN CHILDREN

Chapter 1 : Vesicoureteral reflux - Symptoms and causes - Mayo Clinic

Management and Screening of Primary Vesicoureteral Reflux in Children Published ; Reviewed and Validity Confirmed Vesicoureteral reflux (VUR) and urinary tract infections (UTI) may detrimentally affect the overall health and renal function in affected children.

Immediate access to this article To see the full article, log in or purchase access. Address correspondence to Jonathan H. Reprints are not available from the authors. Dimercaptosuccinic acid renal scintigraphy for the evaluation of pyelonephritis and scarring: J Urol ; 5 Pt 2: The evaluation and management of vesicoureteral reflux. Practice guideline for the management of infants and children 0 to 36 months of age with fever without source. Agency for Health Care Policy and Research. Relationship among vesicoureteral reflux, P-fimbriated Escherichia coli, and acute pyelonephritis in children with febrile urinary tract infection. Renal scarring following reflux and nonreflux pyelonephritis in children: Vesico-ureteric reflux and renal scarring. Dick PT, Feldman W. Routine diagnostic imaging for childhood urinary tract infections: Renal sonography is not a reliable screening examination for vesicoureteral reflux. Rushton HG, Majd M. The detection and characterization of vesicoureteral reflux in the child. The long-term results of prospective sibling reflux screening. The transmission of vesicoureteral reflux from parent to child. Am J Kidney Dis. Pediatric Vesicoureteral Reflux Guidelines Panel summary report on the management of primary vesicoureteral reflux in children. The uninhibited bladder in children: Effects of oxybutynin on vesicoureteral reflux in children. Vesicoureteral reflux and voiding dysfunction: Vesicoureteric reflux and videourodynamic studies: Constipation, bladder instability, urinary tract infection syndrome. Urinary incontinence and urinary tract infection and their resolution with treatment of chronic constipation of childhood. Results of a randomized clinical trial of medical versus surgical management of infants and children with grades III and IV primary vesicoureteral reflux United States. The International Reflux Study in Children. Endoscopic treatment of vesicoureteral reflux with subureteric injection of glutaraldehyde cross-linked bovine collagen [Abstract]. American Urological Association 89th annual meeting. San Francisco, California, May 14-19, 1996. J Urol ; 5 Suppl: Endoscopic subureteral collagen injection for the treatment of vesicoureteral reflux in infants and children. Association of type 1 blood group antigens with urinary tract infections in children with genitourinary structural abnormalities. Decreased incidence of urinary tract infections in circumcised male infants. Risks from circumcision during the first month of life compared with those for uncircumcised boys. Corroborative evidence for the decreased incidence of urinary tract infections in circumcised male infants. Urinary tract infections and the uncircumcised state:

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Chapter 2 : Vesicoureteral reflux - Diagnosis and treatment - Mayo Clinic

Weiss R., Duckett J.W., Spitzer calendrierdelascience.coms of a randomized clinical trial of medical versus surgical management of infants and children with grades III and IV primary vesicoureteral reflux (United States).

The American Urological Association established the Vesicoureteral Reflux Guideline Update Committee in July to update the management of primary vesicoureteral reflux in children guideline. The Panel defined the task into 5 topics pertaining to specific vesicoureteral reflux management issues, which correspond to the management of 3 distinct index patients and the screening of 2 distinct index patients. This report summarizes the existing evidence pertaining to children with diagnosed reflux including those young or older than 1 year without evidence of bladder and bowel dysfunction and those older than 1 year with evidence of bladder and bowel dysfunction. From this evidence clinical practice guidelines were developed to manage the clinical scenarios insofar as the data permit. The database was reviewed and each abstract segregated into a specific topic area. Exclusions were case reports, basic science, secondary reflux, review articles and not relevant. The extracted article to be accepted should have assessed a cohort of children with vesicoureteral reflux and a defined care program that permitted identification of cohort specific clinical outcomes. The extracted data were analyzed and formulated into evidence-based recommendations. A total of 2, articles were reviewed and data were extracted from articles. Data from 17, patients were included in this analysis. This systematic meta-analysis identified increasing frequency of urinary tract infection, increasing grade of vesicoureteral reflux and presence of bladder and bowel dysfunction as unique risk factors for renal cortical scarring. The efficacy of continuous antibiotic prophylaxis could not be established with current data. However, its purported lack of efficacy, as reported in selected prospective clinical trials, also is unproven owing to significant limitations in these studies. Reflux resolution and endoscopic surgical success rates are dependent upon bladder and bowel dysfunction. The Panel then structured guidelines for clinical vesicoureteral reflux management based on the goals of minimizing the risk of acute infection and renal injury, while minimizing the morbidity of testing and management. These guidelines are specific to children based on age as well as the presence of bladder and bowel dysfunction. Recommendations for long-term followup based on risk level are also included. Using a structured, formal meta-analytic technique with rigorous data selection, conditioning and quality assessment, we attempted to structure clinically relevant guidelines for managing vesicoureteral reflux in children. The lack of robust prospective randomized controlled trials limits the strength of these guidelines but they can serve to provide a framework for practice and set boundaries for safe and effective practice. As new data emerge, these guidelines will necessarily evolve.

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Chapter 3 : Surgical management of vesicoureteral reflux in children

Surgical resolution of VUR has been shown to reduce the incidence of febrile UTIs, 11 x 11 Elder, J.S., Peters, C.A., Arant, B.S. Jr et al. Pediatric Vesicoureteral Reflux Guidelines Panel summary report on the management of primary vesicoureteral reflux in children.

Print Diagnosis Urinalysis “ lab analysis of a urine sample “ can reveal whether your child has a UTI. Other tests are necessary to determine the presence of vesicoureteral reflux, including: Kidney and bladder ultrasound. Also called sonography, this imaging method uses high-frequency sound waves to produce images of the kidney and bladder. Ultrasound can detect structural abnormalities. This same technology, often used during pregnancy to monitor fetal development, may also reveal swollen kidneys in the baby, an indication of primary vesicoureteral reflux. A thin, flexible tube catheter is inserted through the urethra and into the bladder while your child lies on his or her back on an X-ray table. Then the catheter is removed so that your child can urinate, and more X-rays are taken of the bladder and urethra during urination to see whether the urinary tract is functioning correctly. Risks associated with this test include discomfort from the catheter or from having a full bladder and the possibility of a new urinary tract infection. The scanner detects the tracer and shows whether the urinary tract is functioning correctly. Risks include discomfort from the catheter and discomfort during urination. Grading the condition Doctors grade vesicoureteral reflux according to the degree of reflux. In the mildest cases, urine backs up only to the ureter grade I. The most severe cases involve severe kidney swelling hydronephrosis and twisting of the ureter grade V. Treatment Treatment options for vesicoureteral reflux depend on the severity of the condition. Children with mild cases of primary vesicoureteral reflux may eventually outgrow the disorder. In this case, your doctor may recommend a wait-and-see approach. For more severe vesicoureteral reflux, treatment options include: Medications UTIs require prompt treatment with antibiotics to keep the infection from moving to the kidneys. To prevent UTIs, doctors may also prescribe antibiotics at a lower dose than for treating an infection. A child being treated with medication needs to be monitored for as long as he or she is taking antibiotics. This includes periodic physical exams and urine tests to detect breakthrough infections “ UTIs that occur despite the antibiotic treatment “ and occasional radiographic scans of the bladder and kidneys to determine if your child has outgrown vesicoureteral reflux. Surgery Female cystoscopy Female cystoscopy During a cystoscopy exam, your doctor inserts a thin, flexible device called a cystoscope through the urethra into the bladder. Cystoscopy allows your doctor to view your lower urinary tract to look for abnormalities in the urethra and bladder. Surgical tools can be passed through the cystoscope, if needed, to treat some conditions. Male cystoscopy Male cystoscopy During a cystoscopy exam, your doctor inserts a thin, flexible device called a cystoscope through the urethra into the bladder. Surgery for vesicoureteral reflux repairs the defect in the valve between the bladder and each affected ureter. A defect in the valve keeps it from closing and preventing urine from flowing backward. Methods of surgical repair include: Vesicoureteral reflux may persist in a small number of children, but it generally resolves on its own without need for further intervention. Advantages include smaller incisions and possibly less bladder spasms than open surgery. But, preliminary findings suggest that robotic-assisted laparoscopic surgery may not have as high of a success rate as open surgery. The procedure was also associated with a longer operating time, but a shorter hospital stay. This method is minimally invasive compared with open surgery and presents fewer risks, though it may not be as effective. This procedure also requires general anesthesia, but generally can be performed as outpatient surgery. Treatment of vesicoureteral reflux at Mayo Clinic is unique in its individualized approach to medical care. Because bowel and bladder dysfunction can have a significant impact in some patients with recurring urinary tract infections with or without reflux, Mayo Clinic has a state-of-the-art pelvic floor rehabilitation and biofeedback program to help cure these conditions. When surgery is necessary, your Mayo Clinic care team implements a surgical plan designed to give the best results with the least invasive method. Request an Appointment at Mayo Clinic Lifestyle and home remedies Urinary

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tract infections, which are so common to vesicoureteral reflux, can be painful. Encourage your child to drink fluids, particularly water. Drinking water dilutes urine and may help flush out bacteria. They can irritate the bladder and tend to aggravate the frequent or urgent need to urinate. Provide a warm blanket or towel. Place a towel or blanket in the dryer for a few minutes to warm it up. The warmth can help minimize feelings of bladder pressure or pain. Avoiding constipation and emptying the bladder every two hours while awake may help. Preparing for your appointment Doctors usually discover vesicoureteral reflux as part of follow-up testing when an infant or young child is diagnosed with a urinary tract infection. After evaluation, your child may be referred to a doctor who specializes in urinary tract conditions urologist. What you can do Before your appointment, take time to write down key information, including: Is it a bladder or kidney infection? Are there other possible causes for these symptoms? What kinds of tests does my child need? Is my child at risk of complications from this condition? Are my other children at increased risk of this condition? Do you recommend that my child see a specialist? The best treatment option for vesicoureteral reflux – which can range from watchful waiting to surgery – often is not clear-cut. He or she is likely to ask you a number of questions as well. Being ready to answer them may reserve time to go over points you want to spend more time on. Your doctor may ask: When did you first notice that your child was experiencing symptoms? Have these symptoms been continuous or occasional? Does anything seem to improve these symptoms? Does anyone in your family have a history of vesicoureteral reflux? Has your child had any growth problems? What types of antibiotics has your child received for other infections, such as ear infections?

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Chapter 4 : Pediatric Urinary Tract Infection and Reflux - - American Family Physician

Vesicoureteral reflux (VUR) is the most common uropathy affecting children. Compared to children without VUR, those with VUR have a higher rate of pyelonephritis and renal scarring following urinary tract infection (UTI). Options for treatment include observation with or without antibiotic.

This article has been cited by other articles in PMC. Abstract Vesicoureteral reflux VUR is the most common uropathy affecting children. Options for treatment include observation with or without antibiotic prophylaxis and surgical repair. Surgical intervention may be necessary in patients with persistent reflux, renal scarring, and recurrent or breakthrough febrile UTI. Both open and endoscopic approaches to reflux correction are successful and reduce the occurrence of febrile UTI. Estimated success rates of open and endoscopic reflux correction are Factors that affect the success of endoscopic injection include pre-operative reflux grade and presence of functional or anatomic bladder abnormalities including voiding dysfunction and duplicated collecting systems. Few studies have evaluated the long-term outcomes of endoscopic injection, and with variable results. These studies highlight the need for standardized outcome reporting and longer follow-up after endoscopic treatment. The true prevalence of VUR is unknown, as many children are asymptomatic. The prevalence of VUR in normal children has been estimated to be 0. The ureter develops from the ureteral bud, which arises from the mesonephric or Wolffian duct during the fifth week of gestation. The distal end of the bud ultimately becomes incorporated into the part of the urogenital sinus UGS that becomes the trigone. Contrary to previous thought, a recent study of recombinant murine models showed that the trigone derives predominantly from bladder smooth muscle with minor contribution from ureteral smooth muscle [5]. The intramural portion of the ureter is passively compressed by the bladder wall during filling, thus preventing retrograde flow of urine. According to the Mackie-Stephens ureteral bud theory, ectopic ureteral budding leads to an ectopic ureteral orifice [6 , 7]. A ureteral bud that arises low or caudal from the mesonephric duct results in superolateral displacement of the ureteral orifice, insufficient length of the intravesical submucosal ureter, and reflux. Dissections of the UVJ in non-refluxing children demonstrated an approximate tunnel length to ureteral diameter ratio of 5: Interactions of the ureteral bud and well-differentiated metanephric blastema are critical to normal kidney formation. Ectopic budding may lead to interactions with poorly differentiated portions of the metanephros, resulting in renal malformations as dysplasia, hypoplasia, or agenesis, collectively referred to as congenital reflux nephropathy. This is a fluoroscopic study in which the bladder is gravity-filled with contrast using a urethral catheter. A VCUG can be performed following clinical or culture evidence that an active urinary infection has been adequately treated. The radionuclide cystogram RNC may also be used to detect reflux with the advantage of reduced radiation exposure. However, this study provides less anatomic detail e. In our experience, RNC has been used in the follow-up evaluation of patients diagnosed with reflux. Medical evaluation of children with reflux should include measurement of height, weight, blood pressure, urinalysis for proteinuria and bacteruria, and serum creatinine in the presence of bilateral cortical abnormalities [9]. A grading system for reflux was established by the International Reflux Study Committee established in to aid with clinical management and prognostication. Five grades are defined based on the extent of reflux and degree of dilation of the upper tract on imaging [10 , 11] Fig.