

Chapter 1 : Urinary Tract Obstruction. Blocked or impaired urinary tract | Patient

Obstructive uropathy can be a problem in an unborn fetus. One of the signs of obstruction in an unborn baby is a level of amniotic fluids in the womb that's lower than normal. Urine is one of.

This includes problems to the urinary collection system hydronephrosis and kidneys renal dysplasia attributed to the backpressure from the urinary blockage. Underdevelopment of the lungs pulmonary hypoplasia develops from the lack of amniotic fluid during a critical time of the pregnancy. The cause of fetal LUTO is varied. The most common cause in male fetuses is posterior urethral valves membrane blocks the flow of urine from the bladder. Oligohydramnios low amniotic fluid volume defined as the mIllustration of LUTOaximum vertical pocket less that or equal to 2. In females the most common cause is urethral atresia a body orifice or passage in the body is abnormally closed or absent. Other causes of fetal LUTO include but are not limited to obstructive ureterocele area between the tube that carries urine from the kidneys to the bladder , urethral stricture abnormal narrowing of the urethra or agenesis absence of , persistent cloaca a defect in which the rectum, vagina, and urinary tract are fused together into a single common channel , and megalourethra congenital dilation of the urethra. The ultrasound findings of many of these conditions are similar, and it is often difficult to differentiate the cause of the urinary obstruction until after delivery. Because there are different causes of LUTO, the prognosis can be expected to be different depending on the individual diagnosis. However, a major component that dictates perinatal outcome is the secondary complications of the obstruction renal dysplasia and pulmonary hypoplasia. To prevent these complications, several methods have been developed to bypass the blockage of urine while the baby is still in the womb, with the hope that the backpressure on the kidneys can be averted and the amniotic fluid volume may replenish to allow for more normal lung development. Frequency Significant lower urinary tract obstruction can be found in 1 in pregnancies. There may be variable degrees of dilation of the upper urinary collection system. Assessment of amniotic fluid volume as well as the presence of other potential structural abnormalities is sought. Once the diagnosis of LUTO is established, the prognosis for survival is then assessed. There are two methods to determine the prognosis before surgery. Genetic studies are also performed. If the results of the first drainage are below the threshold values then fetal therapy may be offered. If the first vesicocentesis shows values above the threshold, a repeat vesicocentesis will be performed in 48 hours. An alternative to vesicocentesis is to perform a cordocentesis. Under ultrasound guidance, a needle is placed in the umbilical cord. Fetal blood is drawn and sent for a serum Betamicroglobulin level. If the serum Betamicroglobulin level is less than 5. Management Options and Outcomes The ability to evaluate kidney function is somewhat imprecise. This probably reflects the different diagnoses responsible for the sonographic findings, which do not have a similar prognosis despite comparable fetal urinary findings or vice versa. Despite this limitation, the follow treatment options are available: This approach entails frequent ultrasound assessment to assess progression during the pregnancy. After delivery, pediatric specialists will evaluate the baby and subsequently offer treatments at that time. The risk of this approach is that further kidney and lung damage may occur during the pregnancy. Pregnancies where the obstruction only affects one kidney have a very good prognosis. These pregnancies can be monitored regularly by ultrasound and will likely deliver at full term. This approach is meant to prevent further kidney and lung damage. The final treatment of the obstruction is performed after the birth of the child. This approach, which was developed by Dr. Ruben Quintero, has the theoretic advantage of providing a more precise diagnosis. The ability to establish the correct diagnosis prenatally may improve the counseling capacity. In addition, ablation of posterior urethral valves or other in utero endoscopic treatments of fetal lower urinary tract obstruction may be performed. Whether these theoretical advantages translates into improved perinatal outcomes remains to be proven, which is why this and other centers are conducting studies in this regard. Risks from placing a needle or trocar into the fetal bladder include: The details of the possible diagnostic and treatment approaches are detailed below.. Sonographic evidence of LUTO. Fetal renal values below threshold shown in items 5 and 6 listed below. Twin gestation may be included. Details of Procedures The procedure s will be performed under local anesthesia. Fetal anesthesia will be delivered to the fetus with a

fine needle under ultrasound guidance prior to entering the fetal bladder. Techniques Vesicoamniotic catheter placement: A vesicoamniotic shunt will be placed in all cases over a wire guide. This can be done under ultrasound guidance. Endoscopic documentation of adequate shunt placement may be performed as well. Vesicoamniotic shunting may be necessary several times during the pregnancy due to dislodgement of the shunt or continued urinary outlet obstruction. The bladder wall, mucosa, trigone, and urethra will be the targets of the endoscopic assessment. If posterior urethral valves are identified, the valves will be ablated using laser energy through a contact YAG laser fiber. Similarly, an obstructive ureterocele may be incised within the fetal bladder with a contact laser fiber. There may be rare circumstances that fetal urethral patency unblocked condition may be assessed with a soft wire guide. If patency is documented, a thin transurethral catheter may be placed over a wire guide. In these cases, access to the fetal bladder may best be achieved by fetal hydrolaparoscopy. An incision is made over the bladder dome with YAG laser energy, until the inside of the bladder can be seen. If the urethra can be accessed and the posterior urethral valves can be ablated, this is done at this point. Otherwise, surgery is completed by placing a peritoneoamniotic shunt. Postoperative Care Before birth, it is recommended that ultrasound assessment occur every week for the first four weeks, then every three to four weeks thereafter. Ultrasound parameters of particular importance include the amount of amniotic fluid volume, measurement of the fetal bladder, assessment of the fetal kidneys and urinary collection system, presence of urinary ascites, and location of the vesicoamniotic shunt. After birth, the child will be evaluated by pediatric specialist and may require further tests and treatments.

Chapter 2 : Urinary retention - Wikipedia

Urinary obstruction is the result of impairment of the urinary flow along the urinary tract. This can have a number of causes. It may occur at any point in the urinary tract from the renal calyces to the external urethral meatus.

While it is possible for the urinary tract to be obstructed by a large mass tumour, stone, or foreign body lying in the bladder, the tubular portions of the tract urethra and ureters are much more vulnerable to obstruction. The urethra may be obstructed. Obstructions are classified as congenital or acquired. Congenital blockage usually takes the form of valvelike folds or partitions in the mucous membrane lining the excretory ducts. The most frequent site is the junction of the ureter and the renal pelvis. An obstruction of this nature is symptomless and difficult to diagnose; consequently, a great deal of damage can be done to the kidneys before it is discovered. Acquired obstructions are usually caused by malfunction or abnormal changes in the excretory passages. Obstructions can occur in the urethra from stricture of the wall, usually as a result of infections, or, in males, from enlargement of the prostate gland, which surrounds the urethra. When the urethra is blocked, urine backs up in the bladder. The bladder walls become stretched, and the walls of the bladder, ureters, and renal pelvis may thicken. Infections can set in, which may cause further thickening and inflammation in the ureter, bladder, and pelvic walls. Obstruction of the bladder is caused by tumours, by mineral deposits that form stones, by an enlarged prostate, or by neuromuscular disorders. Some degree of dilatation and obstruction of the ureters occurs during a normal pregnancy, caused by the pressure of a growing fetus and by hormones that cause relaxation of muscle tone. The major concern in a blockage or obstruction is the backup of fluids into the kidney, which causes the renal pelvis and calyces to become grossly distended. The functioning tissue of the kidneys can be totally destroyed: This speeds up kidney tissue degeneration. Infections commonly complicate the already deteriorating condition. Kidney tubules and structures that produce urine are replaced by fibrous scar tissue. Urine constituents are reabsorbed by the renal veins, tubes, and lymphatic channels, leading to uremia. Because complete urinary tract obstruction can lead to renal failure, treatment must be prompt. Analgesics to relieve pain and antibiotics to prevent infection may be given while diagnostic imaging and urine tests are performed; in some cases, a urinary catheter can be pushed past the obstruction into the bladder to allow urine to escape. Complete or recurrent obstruction and obstruction caused by prostate disease often require surgical treatment. Learn More in these related Britannica articles:

Urinary tract obstruction is a blockage that inhibits the flow of urine through its normal path (the urinary tract), including the kidneys, ureters, bladder, and urethra. Blockage can be complete or partial.

Dehydration Causes of Urinary Tract Obstruction in Cats The causes of urinary tract obstruction are not fully understood by veterinarians. In some cases, the obstruction develops suddenly; in others, it may take several days or even weeks. Some cases of incomplete obstruction can clear up within a week. However, there is a high risk of recurrence within months in these cases. There are some suspected causes of urinary tract obstruction: Once the diagnosis has been confirmed, your vet will conduct a blood test to determine kidney function. This will help identify whether or not there are any underlying kidney diseases which may be causing the obstruction. Your vet will also take a urine sample and conduct a urinalysis, examining the sample for crystals and stones. If the issue has recurred, an X-ray may also be performed to identify stones in kidneys and bladder. If the cause is anatomical and there is blood present in the urine, your vet will take a contrast urethrogram. This will show if there are any defects within the bladder, including a narrow urethra. The first step your vet will take is administering anesthetic and inserting a catheter into the urethra. In some cases, this can be a solution to the problem. The bladder will be flushed through the catheter, which will be left in place for a few days to allow remaining debris to drain. The insertion of the catheter may push the obstruction back into the bladder with the help of a saline flush and the use of a water-based lubricant. Once the obstruction has been flushed back into the bladder, the vet will perform a cystotomy, a surgical procedure which will open the bladder. The stones will then be removed. If the obstruction has caused trauma in the urethra, or if the condition is recurring, the vet may have to perform a urethrostomy. This type of surgery will involve creating a new opening in the urethra, allowing for easier urination. Depending on the severity of the blockage, the new opening may be a temporary solution, or a permanent one.

Recovery of Urinary Tract Obstruction in Cats Your cat will likely be kept in the veterinary hospital for a few days so that your vet or surgeon can ensure that the condition is improving. Cats that undergo surgery will be sutured and have to wear a pet cone, or e-collar, for about two weeks to prevent them from biting at the surgery site. It is very important that you monitor your cat closely in the two weeks following surgery. If your cat causes any trauma to the sutures or surgery site, this can cause bacterial infection or recurrence of the blockage. However, as long as the surgery is successful and healing goes smoothly, the blockage is unlikely to come back.

Chapter 4 : Ureteral obstruction - Symptoms and causes - Mayo Clinic

Urinary tract obstruction is a common problem encountered by urologists, primary care physicians, and emergency medicine physicians. Obstruction can occur at any point in the urinary tract, from the kidneys to the urethral meatus. It can develop secondary to calculi, tumors, strictures, anatomical.

Consumption of some psychoactive substances, mainly stimulants, such as MDMA and amphetamine. Stones or metastases can theoretically appear anywhere along the urinary tract, but vary in frequency depending on anatomy. Diagnosis[edit] As seen on axial CT Ultrasonography showing a trabeculated wall, seen as small irregularities mainly at left superior part. This is strongly associated with urinary retention. Common findings, determined by ultrasound of the bladder, include a slow rate of flow, intermittent flow, and a large amount of urine retained in the bladder after urination. A TRUS biopsy of the prostate trans-rectal ultra-sound guided can distinguish between these prostate conditions. Serum urea and creatinine determinations may be necessary to rule out backflow kidney damage. Cystoscopy may be needed to explore the urinary passage and rule out blockages. In acute cases of urinary retention where associated symptoms in the lumbar spine are present such as pain, numbness saddle anesthesia, parasthesias, decreased anal sphincter tone, or altered deep tendon reflexes, an MRI of the lumbar spine should be considered to further assess cauda equina syndrome. Play media The urinary bag of a person with post obstructive diuresis Urinary retention often occurs without warning. It is basically the inability to pass urine. In some people, the disorder starts gradually but in others it may appear suddenly. Acute urinary retention is a medical emergency and requires prompt treatment. The pain can be excruciating when urine is not able to flow out. Moreover, one can develop severe sweating, chest pain, anxiety and high blood pressure. Other patients may develop a shock-like condition and may require admission to a hospital. Serious complications of untreated urinary retention include bladder damage and chronic kidney failure. In the longer term, obstruction of the urinary tract may cause: Atrophy of the detrusor muscle atonic bladder is an extreme form Hydronephrosis congestion of the kidneys Hypertrophy of the detrusor muscle the muscle that squeezes the bladder to empty it during urination Diverticula formation of pouches in the bladder wall which can lead to stones and infection In acute urinary retention, urinary catheterization, placement of a prostatic stent, or suprapubic cystostomy relieves the retention. In the longer term, treatment depends on the cause. BPH may respond to alpha blocker and 5-alpha-reductase inhibitor therapy, or surgically with prostatectomy or transurethral resection of the prostate TURP. Use of alpha-blockers can provide relief of urinary retention following de-catheterization for both men and women. Medication[edit] Some people with BPH are treated with medications. These include tamsulosin to relax smooth muscles in the bladder neck, and finasteride and dutasteride to decrease prostate enlargement. The drugs only work for mild cases of BPH but also have mild side effects. Some of the medications decrease libido and may cause dizziness, fatigue and lightheadedness. Catheter[edit] Acute urinary retention is treated by placement of a urinary catheter small thin flexible tube into the bladder. This can be either an intermittent catheter or a Foley catheter that is placed with a small inflatable bulb that holds the catheter in place. Intermittent catheterization can be done by a health care professional or by the person themselves clean intermittent self catheterization. Intermittent catheterization performed at the hospital is a sterile technique. Patients can be taught to use a self catheterization technique in one simple demonstration, [10] and that reduces the rate of infection from long-term Foley catheters. Self catheterization requires doing the procedure every 3 or 4 hours times a day. For acute urinary retention, treatment requires urgent placement of a urinary catheter. A permanent urinary catheter may cause discomfort and pain that can last several days. Older people with ongoing problems may require continued intermittent self catheterization CISC. CISC has a lower infection risk compared to catheterization techniques that stay within the body. While both procedures are relatively safe, complications can occur. In most patients with benign prostate hyperplasia BPH, a procedure known as transurethral resection of the prostate TURP may be performed to relieve bladder obstruction. The majority of these complications are short lived, and most individuals recover fully within 6–12 months. The other parameters, namely the maximum urinary flow and the voiding time were increased and decreased

respectively. For healthy males, no influence was found on these parameters, meaning that they can urinate in either position. The most common cause of urinary retention is BPH. This disorder starts around age 50 and symptoms may appear after 10–15 years. BPH is a progressive disorder and narrows the neck of the bladder leading to urinary retention. While BPH rarely causes sudden urinary retention, the condition can become acute in the presence of certain medications blood pressure pills, anti histamines , antiparkinson medications , after spinal anaesthesia or stroke. In young males, the most common cause of urinary retention is infection of the prostate acute prostatitis. The infection is acquired during sexual intercourse and presents with low back pain, penile discharge, low grade fever and an inability to pass urine. The exact numbers of individuals with acute prostatitis is unknown, because many do not seek treatment. In the USA, at least percent of males under the age of 40 develop urinary difficulty as a result of acute prostatitis. Most physicians and other health care professionals are aware of these disorders. Worldwide, both BPH and acute prostatitis have been found in males of all races and ethnic backgrounds. Cancers of the urinary tract can cause urinary obstruction but the process is more gradual. Cancer of the bladder , prostate or ureters can gradually obstruct urine output. Cancers often present with blood in the urine , weight loss , lower back pain or gradual distension in the flanks. It is usually transient. The causes of UR in women can be multi-factorial, and can be postoperative and postpartum. Prompt urethral catheterization usually resolves the problem.

Chapter 5 : List of Urinary Tract Obstruction Medications - calendrierdelascience.com

Urinary tract obstruction is a urologic disease consisting of a decrease in the free passage of urine through one or both ureters and/or the urethra.

What is obstructive uropathy? Instead of flowing from your kidneys to your bladder, urine flows backward, or refluxes, into your kidneys. The ureters are two tubes that carry urine from each of your kidneys to your bladder. Obstructive uropathy can cause swelling and other damage to one or both of your kidneys. This condition can affect men and women of any age. It can also be a problem for an unborn child during pregnancy. Causes of obstructive uropathy Obstructive uropathy can occur due to a variety of factors. Compression can lead to damage to your kidneys and ureters. Temporary or permanent blockages in your ureter or urethra, through which urine exits your body, can result from: The use of neurogenic drugs to control an overactive bladder can also cause obstructive uropathy in some cases. An enlarged prostate is a frequent cause of obstructive uropathy in men. Pregnant women may also experience a reversed urine flow due to the additional weight of the fetus pressing down on their bladder. However, pregnancy-induced uropathy is very rare. Symptoms of obstructive uropathy The onset of obstructive uropathy can be very quick and acute, or slow and progressive. The level and location of pain varies from person to person and depends on whether one or both kidneys are involved. Fever, nausea, and vomiting are also common symptoms of obstructive uropathy. You may experience swelling or tenderness in the kidneys as urine flows backward into your organs. A change in your urinary habits can indicate a blockage in your ureters. Symptoms to look for include: Usually, both kidneys need to be blocked to impact urine output. Urine is one of the components of amniotic fluid. A fetus with obstructive uropathy is unable to urinate outside their body. This leads to a drop in amniotic fluid volume, which can lead to fetal or birthing complications.

Chapter 6 : Obstructive uropathy: MedlinePlus Medical Encyclopedia

Urinary tract obstruction, blockage or constriction at any point in the urinary tract that impedes the normal flow of urine and causes urine to be retained in the bladder or kidneys. When an obstruction causes urine to become backed up into the kidneys, the condition is known as hydronephrosis.

Chapter 7 : Bladder outlet obstruction: Causes in men? - Mayo Clinic

Obstructive uropathy occurs when urine cannot drain through the urinary tract. Urine backs up into the kidney and causes it to become swollen. This condition is known as hydronephrosis.

Chapter 8 : Lower Urinary Tract Obstruction - Fetal Health Foundation

Obstructive uropathy, or urinary tract obstruction, is a condition where your urine is unable to flow through your bladder, urethra, or ureter due to a partial or complete urinary tract blockage. As a result, your urine flows backward into your kidneys rather than comfortably flowing from your.

Chapter 9 : Urinary Tract Obstruction | Clinical Gate

The urinary retention associated with lower urinary tract obstruction provides an excellent culture medium for bacteria. Patients may present with cystitis, pyelonephritis, or sepsis. An obstructing renal stone may also be a nidus for infection.