

## Case Report on Vesicoureteral Reflux

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### ABSTRACT

**Introduction:** -Infants and children are the most often used victims of vesicoureteral reflux. Infections of a urinary tract are more likely as a result of the illness, if left untreated, this condition might lead to kidney damage. In children, primary vesicoureteral It can lead to kidney damage. Primary vesicoureteral reflux affects children. Can be outgrown. The goal of treatment, which may involve medication or surgery, is to avoid kidney damage. Primary vesicoureteral reflux can be outgrown in children. The goal of treatment, which may involve medication or surgery, is to avoid kidney damage. In children, the most common congenital urological anomaly areas primary vesicoureteral reflux (VUR), It's been related to a higher Urinary tract infection (UTI) and kidney scarring both are risk, commonly known as nephropathy caused by acid reflux (RN)The most prevalent cause of RN n children is a urinary tract infection (acquired RN) or at a later stage for hydronephrosis diagnosed antenatally but without a prior UTI (congenital RN).Female children are more likely to get acquired RN, whereas male children are more likely to develop congenital RN. This finding in children could explain why males are more likely than Hypertension, proteinuria, and renal failure are all symptoms of renal failure. Females, on the other hand, are more likely to get and had a better prognosis for recurring UTI eternal reflux-Urge to urinate that is strong and Persistent when urinating, there is a burning feeling. The need to pass tiny amounts of pee frequently, cloudy urine, fever, or side pain are all indications of kidney failure (flank) or abdomen.

**Main symptoms and/or important clinical findings:** A patient of 1 year male admitted registration to the pediatric ward on dated 05 /07/21 with the chief complaint. Wetting the bed or losing control of bowel movements are both signs of a problem.constipation for 2 months and he developed pain abdomen and right kidney diagnosed from general physical examination and blood investigation.

**The main diagnose therapeutic intervention and outcomes:**The doctor identified a case of Vesicoureteral reflux after physical examination and investigation A patient of 1 year male admitted registration to the pediatric ward on dated 05 /07/21 with the chief complaint. vomiting the bed or losing control of bowel motions, constipation for 2 months and he developed pain abdomen and right kidney diagnosed from general physical examination and blood investigation.

**Keywords:** Vesicoureteral Reflux [VUR],pain abdomen,right kidney, ultrasound, Reflux Nephropathy.

### Introduction

In young children, Urine is filtered as it travels backwards from the bladder to the kidney. called vesicoureteral reflux (VUR). VUR is a voiding cystourethrogram that also is done after a voiding cystourethrogram.be diagnosed in roughly Urinary tract infections affects 30% of children. The majority of VUR cases recover on their own; Between 20% and 30% of men have new Although only a tiny fraction of infections leads to longer renal damage,complications.VUR is caused by the breakdown Cellular differentiation and complex signaling pathways throughout development. These systems are most likely They are genetically programmed, but environmental

factors may influence them. VUR manifests itself in a variety of ways, illnesses ranging from mild renal parenchymal disease to end-stage renal disease and severe renal parenchymal disease. [1,2,3]

In the general population, Vesicoureteral reflux (VUR) affects less than 1% of people. 2 In children, the prevalence of urinary tract infection (UTI) ranges from 29% to 50%.<sup>11</sup> The kidneys are at risk of scarring when reflux is paired with a urinary tract infection (UTI) and a urinary tract infection (UTI) intrarenal reflux, Renal failure is a disease in which the kidney has come to the end of [ESRD]. Is a disease in which the renal were damaged [ESRD]. [4,5,6]

Primary VUR (vesicoureteral reflux) is a prevalent condition. urinary system defect. that is the problem usually found after an Infection of the urinary tract in children (UTI). The voiding cystourethrogram (VCUG) is a treatment that is classified from I to V, with V being the most severe, is the gold standard for identifying how acute a disease is. In patients who suffer from VUR a condition known as reflux nephropathy (RN) develops. And is often accompanied with an infection in the urinary tract (UTI) Renal scarring, on the other hand, can happen if you have a UTI without a VUR or if you have a VUR without a UTI. The evidence for the for a long time, the former has been documented in the literature, Whereas The latter has more recent evidence, especially from children with hydronephrosis diagnosed during birth who are discovered to be sick from VUR and renal scarring on post-natal evaluation. The RN is now classified as either congenital (also known as primary) or acquired (also known as modified) caused by irregular renal development, resulting in focal renal dysplasia, or acquired, resulting in focal renal dysplasia. induced by renal harm caused by pyelonephritis. [7,8,9]

Vesicoureteral reflux (VUR) may be suspected when the upper urinary tract is a tube connected the urethra to temporarily dilated Observed synced with the emptying of the bladder during pregnancy. Approximately 10% of the newborns with prenatally identified the effect of dilatation of the upper urinary tract will be felt. a urinary tract infection. Experience reflux after birth. It is important to highlight that VUR cannot be detected during pregnancy. Unless complicated by a urinary tract infection, there are no specific signs or symptoms associated with VUR (UTI). To put it another way, unless VUR has caused a kidney infection, it is almost always asymptomatic (febrile UTI). Irritability, a high fever that persists, and a feeling of being bored are among the A neonate's clinical manifestations of a febrile UTI. could display in cases of VUR and febrile UTI caused by a serious underlying urinary tract abnormality, antibiotic should be used, symptoms include Respiratory distress, failure to thrive, renal failure, flank masses, and urinary ascites are all signs that you should be aware. [10,11,12]

#### **Symptoms of Vesicoureteral reflux**

Urge to urinate it is strong & persistent. The need to pass small amounts of urine frequently.

Urine that is cloudy. Fever, pain in your side (flank) or abdomen.

**Patient Specific information:** -A patient of 1 year male admitted registration to the pediatric ward on dated 05/07/21 with the chief complaint. Wetting the bed or losing control of bowel motions, constipation for 2 months and he developed pain abdomen and right kidney. All diagnosis like ultrasound-ray, CT scan, blood examination a voiding cysto -urethrogram (VCUG) and all other investigation are done. His blood pressure is normal 87/105mmhg, pulse 130bpm, patient was conscious and disoriented

**Primary concern and Symptoms of the patient:** Patient visited in A.V.B.R.H hospital on dated 05/07/21 with chief complaint of pain in abdominal for 2 month then He developed pain in his right kidney.

**Medical, family and psycho-social history:** A case of Vesicoureteral reflux (VUR) was diagnosed by the general physical examination and investigation. Patient belonged to a middle class, nuclear family. He was not mentally stable, he was Disoriented to date, time and place Patient has a good relationship with his family members.

**Relevant past intervention with outcomes:** History of Vesicoureteral reflux since at the birth back for which he was hospitalized for 15 days after investigation was observed he took treatment for that and his outcomes was good.

**Clinical findings:** -bowel and bladder movement is not proper, swelling over kidney, urinary tract infection. State of health was unhealthy, thin body build, the height 77 cm and weight 7.5kg vital signs normal, heart sound abnormal, breathing difficulty.

**Timeline:** Patient was visited in AVBRH hospital on OPD base with chief complaint of Wetting the bed or losing control of bowel motions, constipation for 2 months and he developed pain abdomen and right kidney diagnosed.

**Diagnostic assessment:** On the basis of patient history, physical examination, CT scan, ultrasound, x-ray, blood examination a voiding cysto -urethrogram.

**Diagnostic challenging:** No any challenges during diagnostic evaluation.

**Diagnosis:** After physical examination and this investigation CT scan, ultrasound, x-ray blood examination a voiding cysto -urethrogram doctor diagnoses the patient having Vesicoureteral reflux.

**Prognosis:** Case of prognosis was satisfied

**Therapeutic intervention:**

Medical management was provided to the patient injection Emset 1mg, injection pan top 7mg syp.paracetamol 4 ml.He was took all the treatment and the outcomes was good. His sign symptoms were reduced, he was able to him own activities.No change in therapeutic interventions.

**Follow up and outcomes: -**

**Clinical and patient assessmentoutcomes:**Patient had a history pain in abdominal for 2 months pain in abdomen and swelling over right kidney.

**Adverse and unanticipated event:** No adverse event was noted

**Discussion:** -In early children, VUR, a congenital defect defined by unilateral or bilateral urine reflux from the bladder to the kidneys, is prevalent. After a UTI, a routine voiding cystourethrogram found 30 percent of children under the age of 5 to have VUR, Prenatal mortality varies from 9% to 20%. hydronephrosis with VUR is discovered postnatally. VUR, for the most part, resolves it. Only about 20% to 30% of people is becoming sick again, and only about 20% to 30% of those who are already infected will become infected again. a small proportion will have long-term kidney consequences. discovered of renal scarring is widely established to be linked to the severity of VUR. According to Chen et al., renal scarring was linked to an VUR diagnosis at an older age (five years), a greater VUR grade, anda greater incidence of UTIs. Swirlersson et al. discovered a link between Renal dysplasia, high-grade VUR, and male sex in a similar study. As a result, early detection and treatment of VUR should be preferred in efforts to prevent renal scarring. At the age of ten, our kid was diagnosed with ASB without a history of febrile UTI. Among other things, he had bladder and bowel problems, as well as high-grade VUR and CKD This unusual example of can explain the relation between VUR and CKD, which should not be avoided until later in life. Finally, in male patients with ASB, a thorough radiological imaging study It's probably a good idea to look into it. [13,14,15]

A malfunction of the ureterovesical valve mechanism develops VUR.VUR is classified into five groups based on the international VCUG grading criteria.The kidneys were affected to mild VUR.According to Kamil's research, 80 percent of people who have primary VUR don't need surgery. Only severe VUR has clinical relevance. since it increases risk severe kidney damage if a urinary tract infection occurs. Unless VUR is combined with a urinary tract infection, it may not present with any clinical symptoms or cause any specific symptoms. As a result, asymptomatic VUR can cause long-term kidney damage. After our prenatal observation of grade IV VUR, we performed frequent. Urinary tract infection (UTI) and VURfollow-up examinations after the birth. It indicates that a severe VUR diagnosis by prenatal ultrasound can provide useful information. Earlyadvice for treating and preventing kidney damage after birth. [16]

Hypertension has been associated with VUR stands for ureteropelvic Obstruction at the junction, multicystic dysplastic kidney, and posterior urethral valves are all possible reasons.In children, one of the most common causes of severe hypertension is bulging veins.VUR was found with between 29% to 50% of children with UTIs.And it was generally first sign . Hypertension was found to be more common primary vesicoureteral reflux in children as they became older: 1.7 % in children 1.8 % in children aged 1 to 9.9 years, 4.7 % between the ages of 10- and 14.9-years children between the ages of 15 and 19, 9 years and children aged >20 years. At 30 and 22 As according estimations, 50% of patients with unilateral and bilateral renal There would be harm be hypertensive by the age of 50. Hypertension has been linked to Renal scarring is frequent, and VUR makes it even worse. [17]

**Conclusion:**

The patient was admitted in AVBR hospital with chief complain of Wetting the bed or losing control of bowel motions, constipation for 2 months and he developed pain abdomen and right kidney diagnosed

After all investigation patient was diagnosed a case of Vesicoureteral reflux In our case stresses the need for good clinical assessment, good nursing care by trained nurses and the use of effective forensic studies is compulsory to secure patient form such a vital health conditions.

**Reference:**

1. Alexander SI, Craig JC. Vesicoureteral reflux. *Journal of the American Society of Nephrology*. 2008 May 1;19(5):8847-62
2. Moorthy I, Easty M, McHugh K, RidoutD, L, Gordon I. The presence of vesicoureteric reflux does not identify a population at risk for renal scarring following a first urinary tract infection. *Archives of disease in childhood*. 2005 Jul 1;90(7):733-
3. Mattoo TK. Vesicoureteral reflux and reflux nephropathy. *Advances in chronic kidney disease*. 2011 Sep 1;18(5):348-54.

4. MATTOO, Tej K. Vesicoureteral reflux and reflux nephropathy. *Advances in chronic kidney disease*, 2011, 18.5: 348-354.
5. Choi YD, Lee JH, Lee JW. Unusual Case of Vesicoureteral Reflux and Chronic Kidney Disease in a 10-Year-old Boy with Asymptomatic Bacteriuria. *The Ewha Medical Journal*. 2021 Apr 30;44(2):46-9
6. Zhang T, Wu S. Prenatal ultrasound diagnosis of 1 case of vesicoureteral reflux. *Quantitative imaging in medicine and surgery*. 2016 Jun;6(3):320.
7. SANDAL, Shaifali; KHANNA, Apurv. Vesicoureteral reflux, a scarred kidney, and minimal proteinuria: an unusual cause of adult secondary hypertension. *Case reports in medicine*, 2011, 2011.
8. Bhokardankar, Prashant S., and Bharat Rathir. "Indigenous Wisdom of Ayurvedic Drugs to Treat Urinary Tract Infections." *INTERNATIONAL JOURNAL OF AYURVEDIC MEDICINE* 11, no. 3 (September 2020): 370–77.
9. Jankar, Jayshri Sadashiv, KumudNamdeorao Harley, Kanchan ManoharraoMohod, and Vijay Yashwantrao Babar. "Association of Urinary Albumin with HbA1c Levels in Subjects of Type 2 Diabetes Mellitus in Central India." *JOURNAL OF EVOLUTION OF MEDICAL AND DENTAL SCIENCES-JEMDS* 9, no. 52 (December 28, 2020): 3921–25. <https://doi.org/10.14260/jemds/2020/859>.
10. Wadekar, Abhijit, Yash Gupte, ParthGodhiwala, Swapnil Lahole, Sachin Agrawal, and Sunil Kumar. "Emphysematous Cystitis an Unusual Case of Urinary Tract Infection in Long Standing Rheumatoid Arthritis: A Case Report." *MEDICAL SCIENCE* 24, no. 105 (October 2020): 2993–96.
11. Palkrit S, Naqvi WM, Burhani T. Physiotherapeutic Approach in Stress Urinary Incontinence with Prolapsed Uterus: A Case Report. *JOURNAL OF PHARMACEUTICAL RESEARCH INTERNATIONAL*. 2021;33(34A):54–9.
12. Bele AW, Qureshi MI. Impact of Electrotherapy or Muscle Training on Quality of Life in Urinary Incontinence of Male Geriatric Population-A Protocol. *JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH*. 2021 Mar;15(3).
13. Bhayani, P., Rawekar, R., Bawankule, S., Kumar, S., Acharya, S., Gaidhane, A., Khatib, M., 2019. Profile of urinary tract infection in a rural tertiary care hospital: Two-year cross-sectional study. *Journal of Datta Meghe Institute of Medical Sciences University* 14, 22–26. [https://doi.org/10.4103/jdmimsu.jdmimsu\\_87\\_18](https://doi.org/10.4103/jdmimsu.jdmimsu_87_18)
14. Chadha, A., Salve, M., Bapat, A.V., 2020. Evaluation of the correlation between spot urinary protein/creatinine ratio and serum uric acid and its association with feto-maternal outcome in hypertensive pregnancy. *International Journal of Current Research and Review* 12, S-35-S-37. <https://doi.org/10.31782/IJCRR.2020.SP77>
15. Chandhi, D.H., Bankar, N., Ambad, R.S., Singh, B.R., 2020b. Urinary tract infection by esherichia coli in patients attending tertiary care hospital of central India. *Journal of Critical Reviews* 7, 1089–1092. <https://doi.org/10.31838/jcr.07.08.228>
16. Kasatwar, P., Bele, A., Dhankar, S., Naqvi, W., 2020. Comparative study of effect of vaginal cones as a biofeedback device and pelvic floor exercises in rural females with urinary incontinence. *Journal of Datta Meghe Institute of Medical Sciences University* 15, 36–39. [https://doi.org/10.4103/jdmimsu.jdmimsu\\_181\\_19](https://doi.org/10.4103/jdmimsu.jdmimsu_181_19)
17. 549. Khandelwal, S., Tayade, S., Gode, C., 2020. Prediction of pre-eclampsia by urinary calcium and creatinine ratio. *International Journal of Current Research and Review* 12, 19–22. <https://doi.org/10.31782/IJCRR.2020.SP69>