

Acute Benign Hiccups - The Culprit Could Be A Horseshoe Kidney!

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Abstract

From totally harmless and self limiting annoyance, hiccups (Singultus) can be a sign of serious underlying disease. Horse shoe shaped kidney (HSK), being a precipitant and risk factor for urinary tract infection, could be one such etiology. We are presenting a case of young male adult who presented with acute hiccups as the solo complain and horseshoe kidney was detected in the work up.

Keywords: Hiccups, Singultus, Horse Shoe Shaped Kidney, Urinary Tract Infections.

1. Introduction

Horse shoe kidneys are the most common of all renal fusion anomalies. They are most of the times asymptomatic and are often detected incidentally on ultrasonography. Patients with this anomaly are predisposed to certain diseases than the persons with a normal kidney, urinary tract infections (UTI) being the most common of them. UTI may, very rarely, present as intractable hiccups.

2. Case presentation

A 26 year old young adult male presented in the Outdoor Patient Department of Guru Nanak Dev Hospital with complaint of intractable hiccups since 3 days. He told that he was unable to sleep for the last whole night due to hiccups and was badly annoyed of his problem. The patient had seen a local physician to seek remedy, where he was prescribed tablet ondansetron and tablet metoclopramide, but in vain. There was no history of headache, fever, pain abdomen or burning micturation. He was thin built with moderate pallor, no icterus, no cyanosis, no lymphadenopathy and no clubbing of nails. His cardiovascular, respiratory, gastrointestinal and central

nervous system examination was normal. The laboratory investigations suggested haemoglobin to be 10 gm%, total leucocyte count as 8700 with differential as 67% neutrophils and 30% lymphocytes. The ESR was 36mm at the end of first hour. The electrocardiograph and chest x-ray were normal and so were the basic renal function as well as liver function tests. Computed tomography of the head came out to be normal. An ultrasound (USG) whole abdomen was requested and it revealed a "horse shoe shaped" kidney (Figure 1). On probing, he told he has had multiple episodes of UTI in the past. Urine examination was requested after this finding and it showed 12 pus cells with microscopic haematuria. A provisional diagnosis of acute benign hiccups secondary to UTI secondary to horse shoe kidney was made. Urine and blood cultures were immediately requested and the patient was put on tablet baclofen with urinary alkalizer. He was then referred to nephrology department for further work up.



Figure 1: USG showing both kidneys as low lying, is being united at their poles by a band of tissue.

3. Discussion

Horseshoe kidney, also known as Ren Arcuatus, Renal Fusion or Super Kidney, is a congenital disorder in which the patient's kidneys fuse together at their bases to form a horseshoe-shape during intrauterine development. The fused part is called the isthmus and it may be a functional unit or a nonfunctional fibrotic band.

Horseshoe kidneys are the most common type of renal fusion anomaly. These are found in approximately 1 in 400-500 adults and are more frequently encountered in males (M: F 2:1) [1-3]. The vast majority of cases are sporadic, except for those associated with genetic syndromes like Down syndrome, Turner syndrome, Edward syndrome, Patau syndrome, Ellis-van Creveld syndrome, Fanconi anaemia, Goltz syndrome, Kabuki syndrome, Pallister-Hall syndrome, VACTERL association [1,2]. Horseshoe kidneys are frequently associated with both genitourinary and non-genitourinary malformations [3].

HSK are, in them, asymptomatic and thus they are usually identified incidentally. They are however prone to a number of complications as a result of poor drainage, which may lead to clinical presentation. These complications include: hydronephrosis secondary to pelviureteric junction obstruction, renal stone formation, urinary tract infections (UTI) and pyeloureteritis cystica. Urinary tract infections occur in 27-41% of the patients and it constitutes the most common presentation of horse shoe kidney. Ascending infection from vesicoureteral reflux further enhances the risk of development of UTIs. Like fever, burning micturation, flank pain, abdominal pain, nausea and haematuria; Hiccups can be a manifestation of UTI and it was considered to be the causative factor in this particular case. Horse shoe kidneys are also associated with an increased incidence of malignancy like Wilms tumour, transitional cell carcinoma, renal carcinoid, renovascular hypertension [4-[IJBR \(2016\) 7\(11\)](#)]

6]. By the virtue of location in the lower abdomen, are susceptible to trauma as well [7].

Ultrasonography, Intravenous pyelography (IVP) and Computed Topography (CT scan) are the initial radiologic studies done to determine anatomy and relative renal function in HSK cases.

4. Conclusion

Singultus although most of the times benign and self-limiting, could be a sign of some underlying serious pathology. There are over 100 causes of recurrent or persistent hiccups due to gastrointestinal, central nervous system, cardiovascular, and thoracic disorders [8]. In intractable cases, thorough evaluation should be done for any underlying pathology, if any.

Conflicts of interest: There are no conflicts of interest.

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