

A Rare Case Report on Horse Shoe Kidney in a Female Patient with Primary Infertility

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Abstract: *Horse shoe kidney, a rare fusion defect affecting approximately 1:500 individuals, is characterized by the fusion of two kidneys, often located lower and closer to the front of the body than normal. This case report details a 34-year-old female with a horse shoe kidney presenting a primary infertility and recurrent UTIs. Ultrasonography revealed a malrotated left kidney fused with the malrotated right kidney in the midline anterior to the abdominal aorta. Kidney function tests and CT urography confirmed the findings, showing normal kidney function. Consultation with an urologist resulted in regular follow-up recommendations. This case presents an isolated instance of horse shoe kidney without associated congenital anomalies.*

Keywords: Horse shoe kidney, fusion defect, primary infertility, ultrasonography, CT urography

1. Introduction

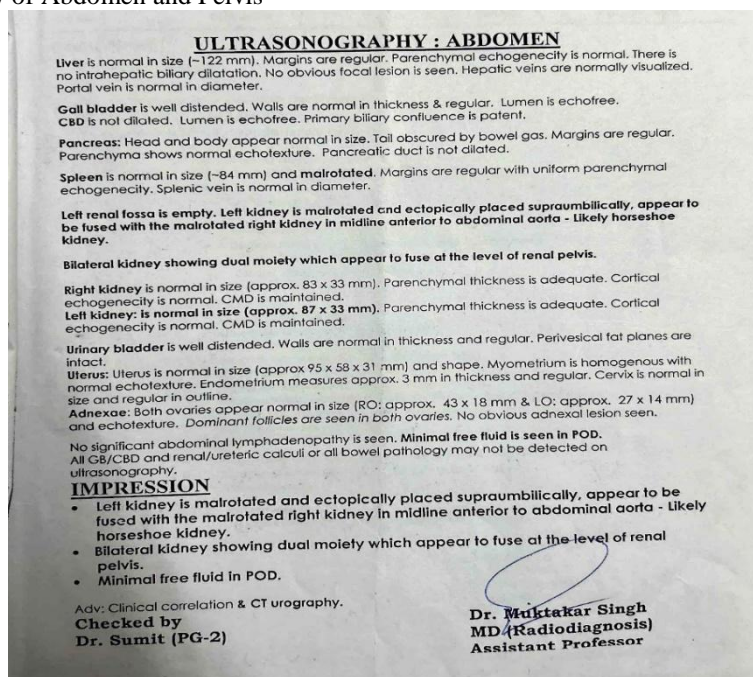
HORSE SHOE KIDNEY is when two kidneys are fused or joined together. A horse shoe kidney is most often set lower and much closer to the front of the body than a normal kidney. Horse shoe Kidneys are the most common fusion defects of the kidneys occurring in approximately 1:500 individuals⁽¹⁾. The male to female incidence is 2:1⁽²⁾.

2. Case Report

This is a case report regarding rare case of horse shoe kidney. A 34 year old female presented to gynaecology

OPD of TSM medical college and hospital with complaint of primary infertility with recurrent UTI. Her married life was 13 years. All investigations of infertility were done as she was to be prepared for Diagnostic laparoscopy. Her ultrasonography of Abdomen and pelvis revealed malrotated left kidney which was ectopically placed supraumbilically and appeared to be fused with malrotated right kidney in the midline anterior to abdominal aorta as depicted in picture 1.

Picture 1: Ultrasonography of Abdomen and Pelvis



So, before proceeding further, her kidney function test was done which was within normal range shown in picture 2.

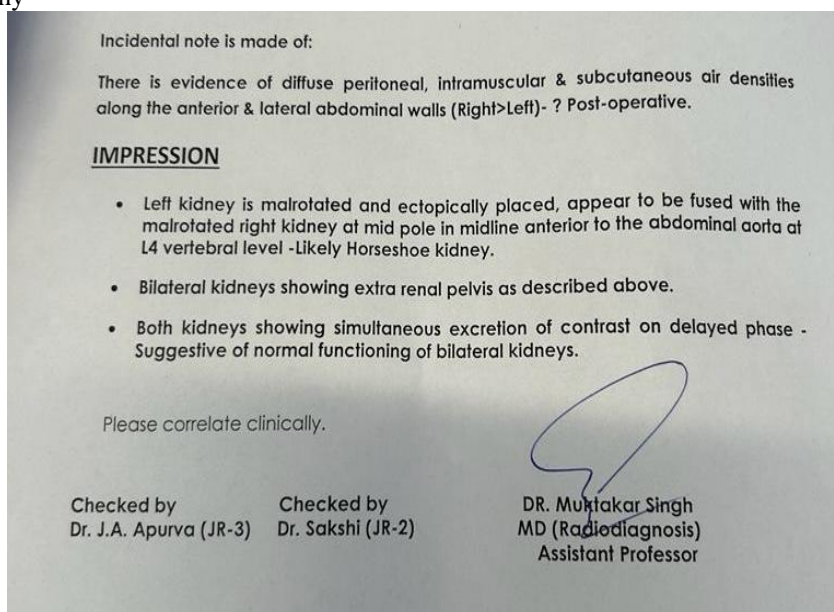
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Tests	Result	Units	Reference Interval
KIDNEY FUNCTION TEST	BLOOD UREA (Urease-GLDH)	17.3	mg/dl 15 - 45
	SERUM CREATININE (Enzymatic)	0.6	mg/dl 0.6 - 1.2
	SERUM SODIUM (Ion selective electrode)	140.1	mmol/l 130 - 145
	SERUM POTASSIUM (Ion selective electrode)	5.1	mmol/l 3.5 - 5.5
	Serum Ionised Calcium Ion Selective Electrode	1.1	mmol/l 1.1 - 1.35
	Serum Chloride Ion Selective Electrode	96.7	mmol/l 95 - 106
	SERUM URIC ACID (Uricase-POD)	3.6	mg/dl 2.4 - 5.7

Picture 2: Kidney Function Test

To confirm the findings of USG and to evaluate function of the kidneys CT UROGRAPHY was done as shows in picture 3.

Picture 3: CT Urography



"CT UROGRAPHY" findings were:

- Left kidney is malrotated and ectopically placed, appear to be fused with the malrotated right kidney at mid pelvis pole in midline anterior to the abdominal aorta at L4vertebral level.
- Bilateral kidneys showing extra renal pelvis.
- Both kidneys showing simultaneous excretion of Contrast on delayed phase - suggestive of Normal functioning Bilateral Kidneys.
- After all these investigations, UROSURGEON CONSULTATION was done and she was advised to come for regular follow up in surgery OPD.

In this case there was no other congenital anomaly associated with horse shoe kidney .On diagnostic

laparoscopy uterus with fallopian tube with bilateral adnexa appeared to be normal.

References

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