

A case report on uncommon cause of acute kidney injury in pregnancy

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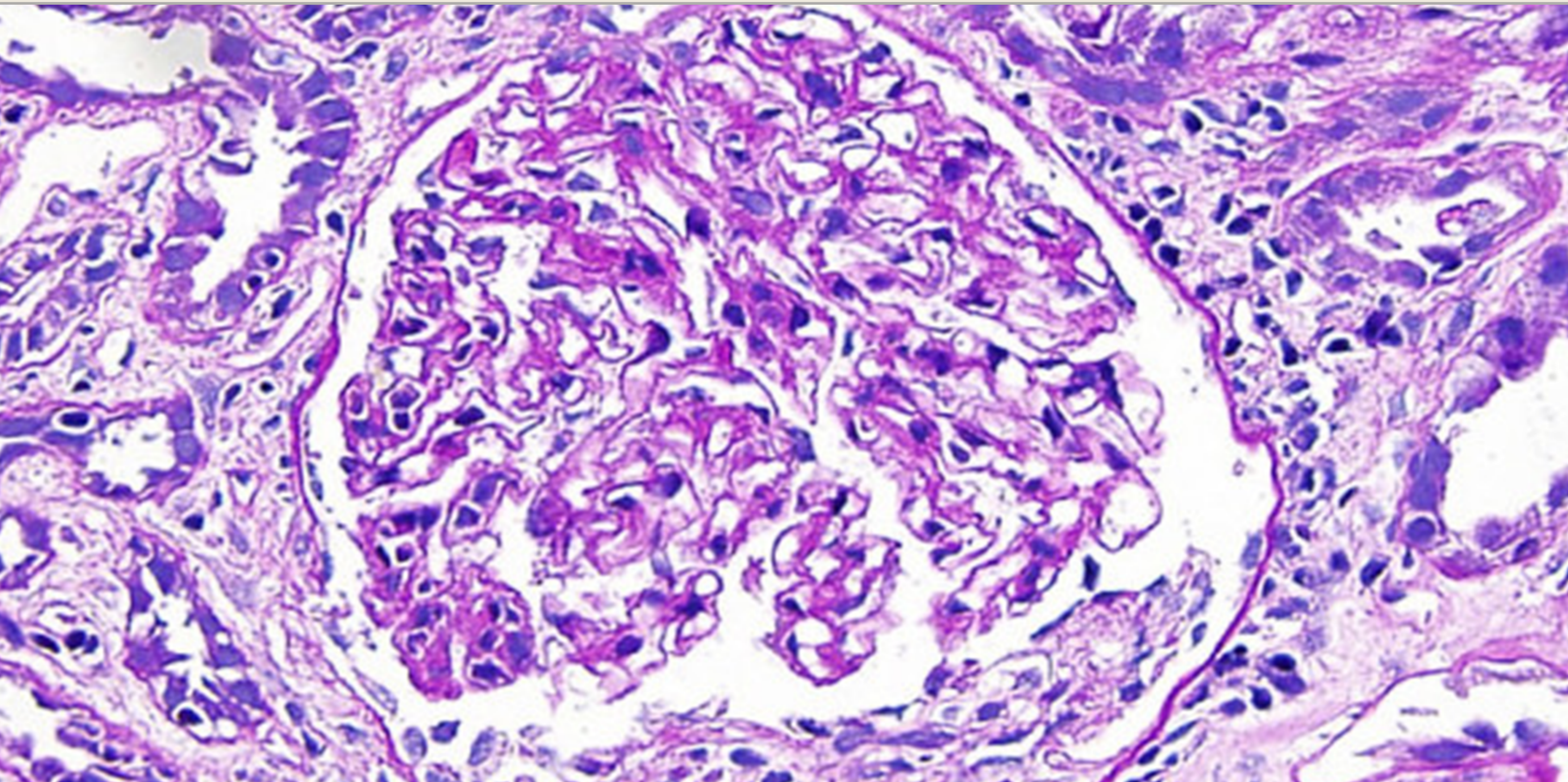
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A study on severe acute interstitial nephritis in pregnancy caused by perceivingly harmless supplements

01. Introduction

The incidence of Acute Kidney Injury (AKI) in pregnancy has significantly reduced in the past few decades with the improvement in accessibility to prenatal medicine and diagnostic tools(1). Here, we discuss a rare case of severe diffuse acute interstitial nephritis in an otherwise well woman, picked up incidentally on routine antenatal blood tests.



02. Case Summary

Primigravida, 13 weeks of gestation, without any past medical comorbidities, was admitted with Acute Kidney Injury (AKI) with creatinine of 230µmol/L. She saw a naturopath prior to pregnancy, who commenced her on Naturobest preconception multivitamin, Biome Iron + Probiotic and Hemagenics iron advanced. This coincided with her increase in creatinine from 69µmol/L to 230µmol/L within three months. Her autoimmune and infectious screen were unremarkable. A radiology guided renal biopsy demonstrated severe diffuse acute interstitial nephritis (AIN) with normal glomeruli and negative immunostains. Her naturopathic medications were ceased and she was commenced on prednisolone and dapsone. She had significant improvement in creatinine level within a week and by 35 weeks of gestation, the creatinine level reached baseline level.

03. Discussion

The kidneys are vulnerable to toxic effects of medications as it is a dynamic organ with high blood flow rate and metabolic activity. These functions are exaggerated during pregnancy which makes the kidneys more susceptible to toxins.

There is paucity of data regarding the use of naturopathic medications and its effect on pregnancy and outcome.

Although the evidence suggests that the most common cause of AKI in early pregnancies are Hyperemesis gravidarum and septic miscarriage; unexplained rise of creatinine during any trimester of pregnancy should raise the possibility of adverse effects owing to the use of naturopathic or allopathic medications and health care providers should be proactive in gathering this information from patients

04. Conclusion

In the above case study, while it is difficult to establish which exact ingredient in the supplements led to the AKI, the causal link of AIN to these supplements is undeniable. Health care providers should caution patients of the potential side effects and risks associated with over-the-counter drugs like with any other prescription medicine.

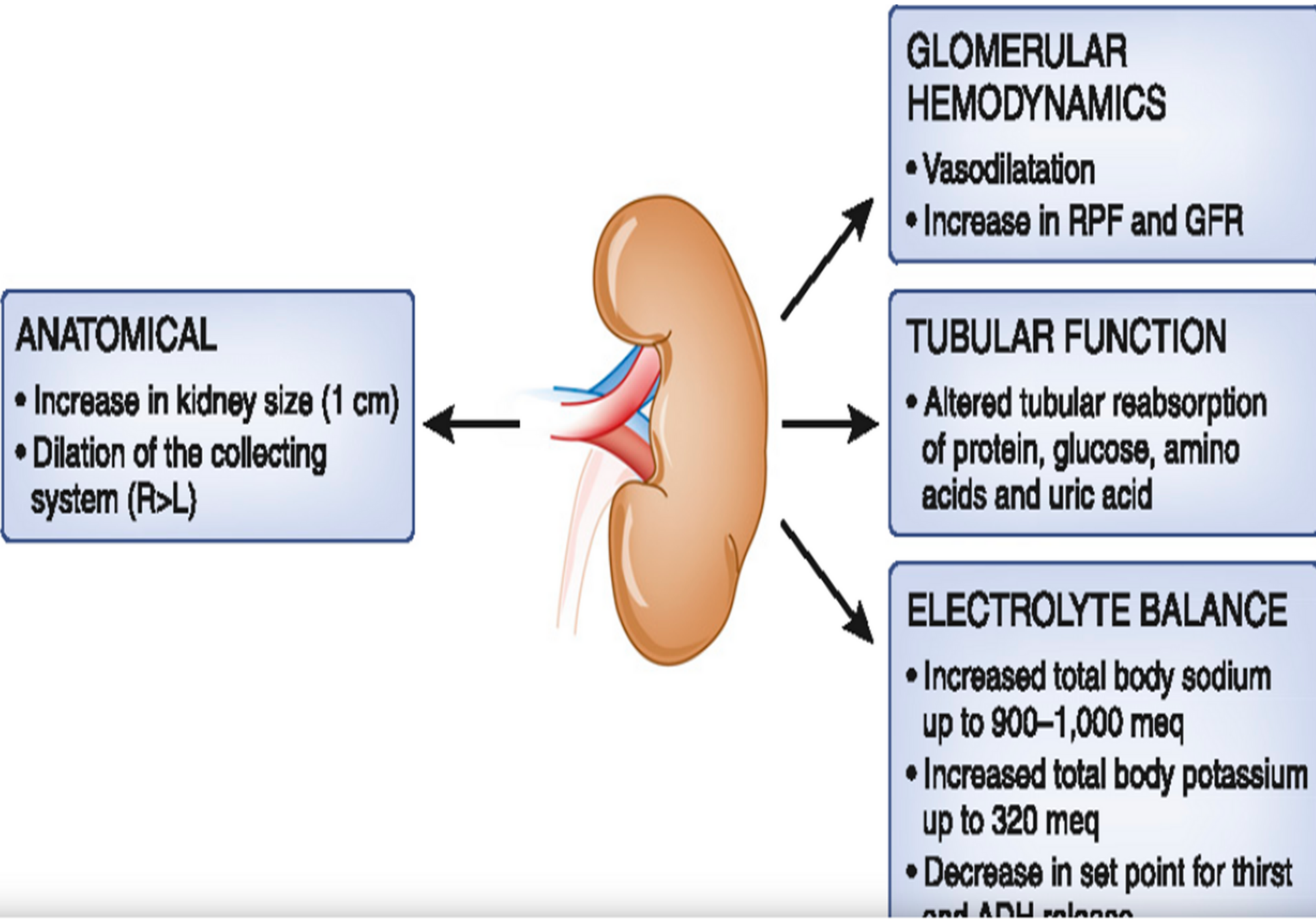


Figure 1. | Summary of renal hemodynamic and metabolic adaptations to normal human pregnancy. RPF, renal plasma flow; ADH, antidiuretic

05. References

1. Jha V, Rathi M. Natural medicines causing acute kidney injury. Semin Nephrol. 2008 Jul;28(4):416-428. doi: 10.1016/j.semnephrol.2008.04.010. PMID: 18620964.
2. Wiles KS, Banerjee A. Acute kidney injury in pregnancy and the use of non-steroidal anti-inflammatory drugs.The Obstetrician &Gynaecologist2016;18:127–35. DOI: 10.1111/tog.12257