

Primary kidney disease in pregnancy vs pre-eclampsia: What is the underlying pathology? – a Case Report

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BACKGROUND

- Focal segmental glomerulosclerosis (FSGS) is one of the most common glomerular disease which manifests with an acute or subacute onset of nephrotic syndrome without renal insufficiency.
- Pregnancy can influence the progression of the disease.
- The possibility of pregnancy complications depends on the kidney function, hypertension, and proteinuria.
- The main goal of treatment is to treat this kidney disease during pregnancy.

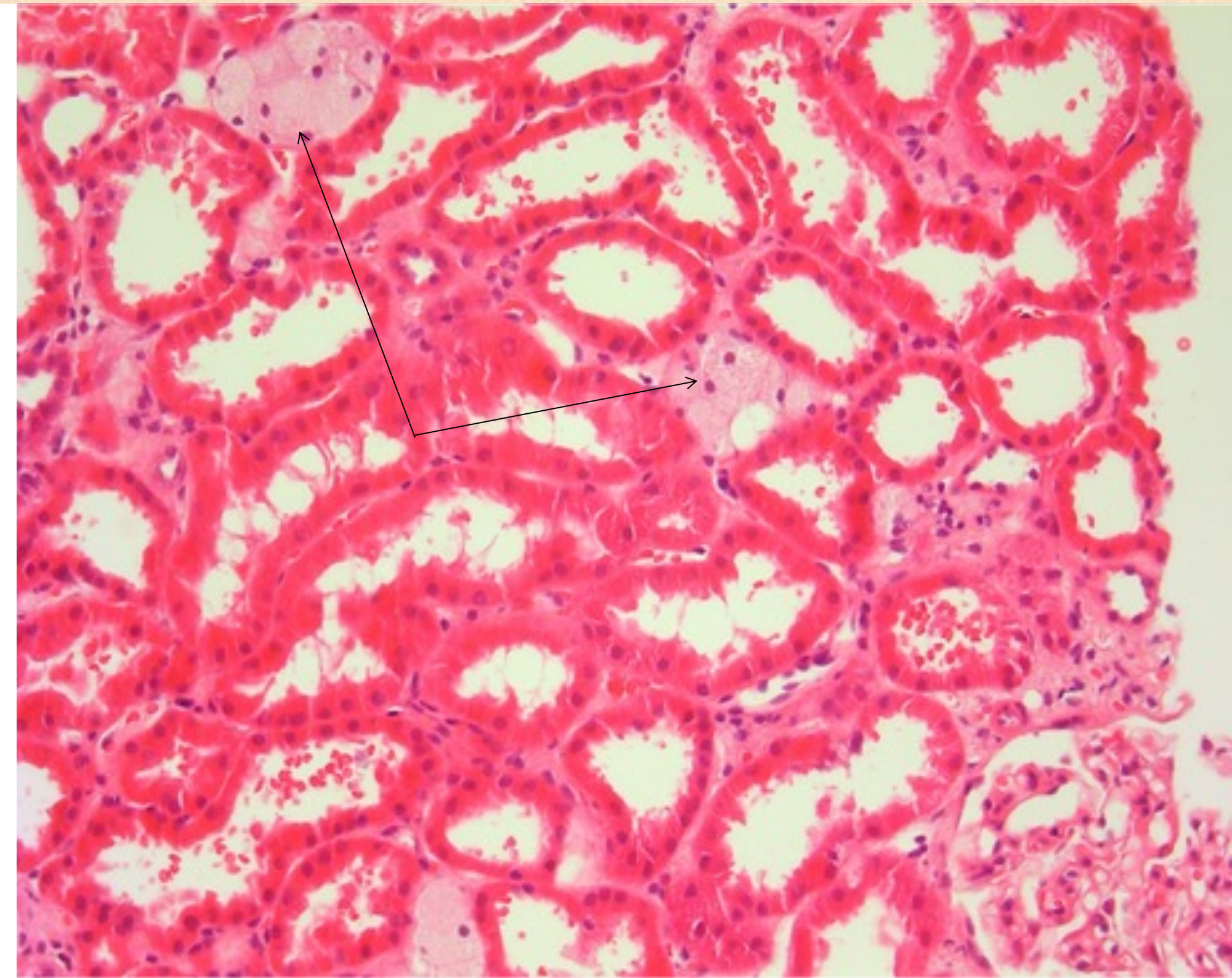


Figure 1: Well preserved tubules and interstitium with occasional interstitial foam cells (arrow). H&E low power.

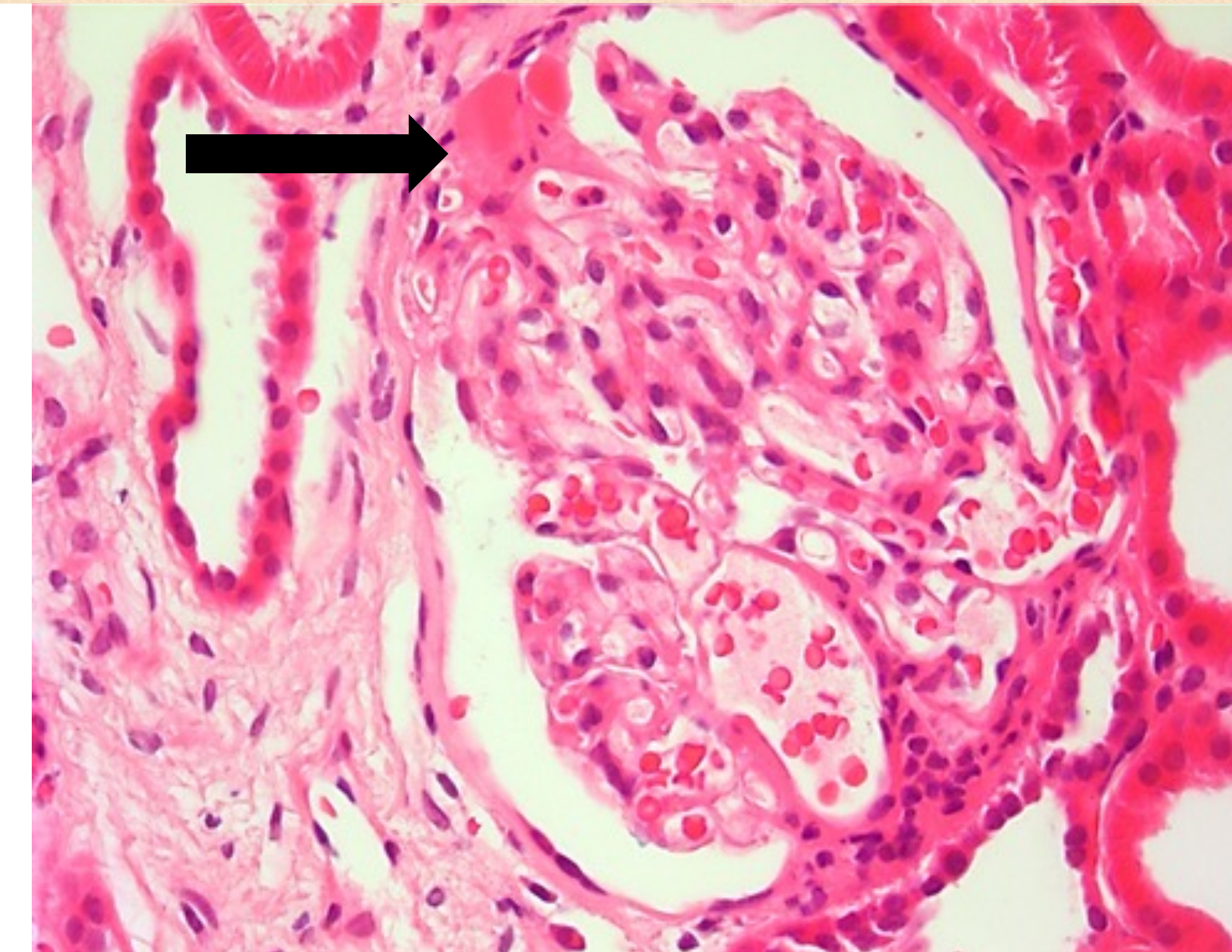


Figure 2: Glomerulus with a segmental adhesion/sclerosis at its tip (arrow). H&E high power.

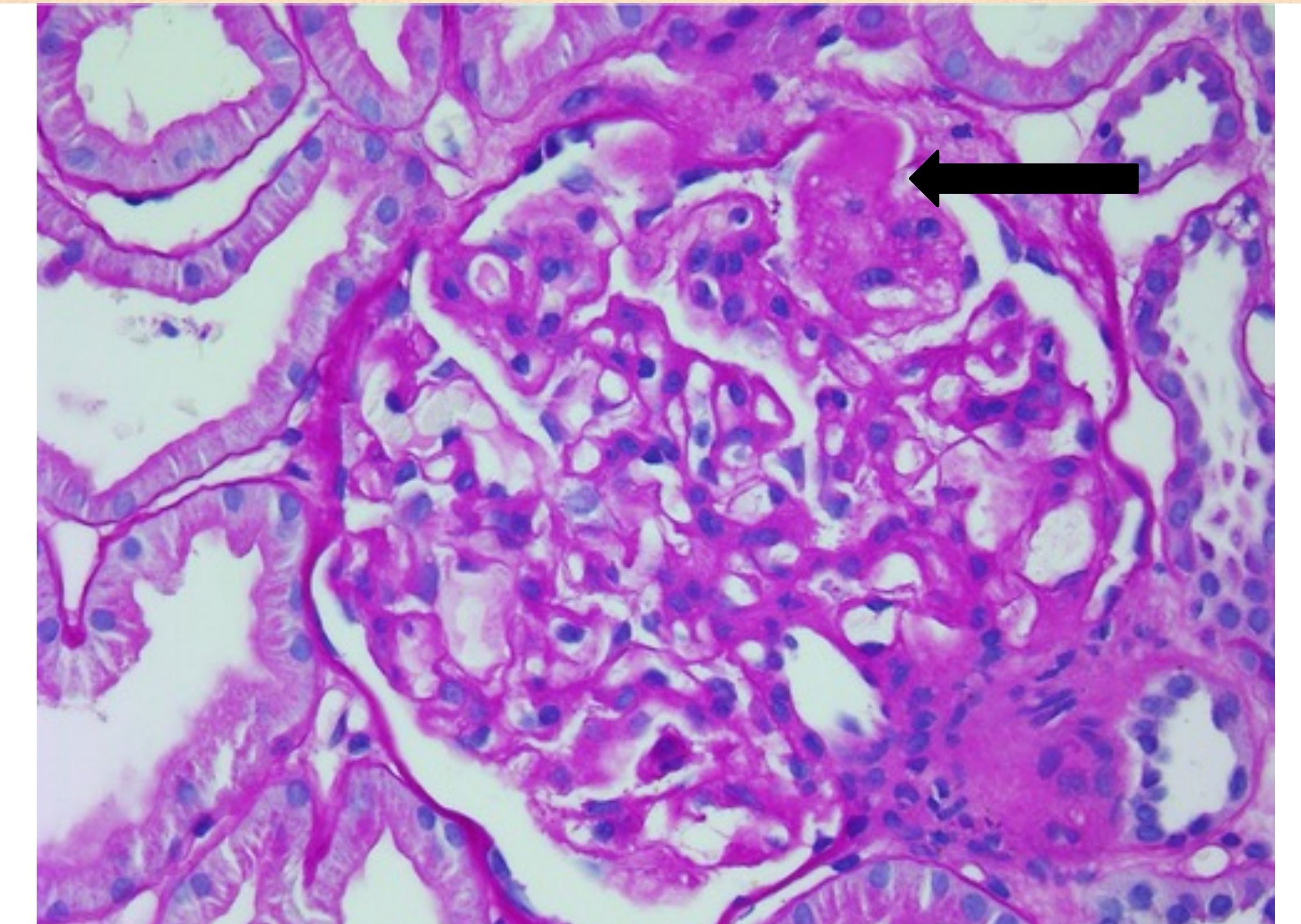


Figure 3: Glomerulus with segmental lesion and hyalinosis (arrow). PAS high power.

CASE HISTORY

- A 31-year-old woman, G4P1+1, presented with proteinuria (urine PCR = 1000 mg/mmol).
- Albumin, lupus serology, HIV, Hep B and C and anti-phospholipase receptor antibodies were all negative.
- She has a history of previous emergency caesarian section at 34/40 in 2019 due to severe pre-eclampsia and intrauterine growth restriction and a delayed miscarriage in 2021.
- Proteinuria identified at 16 weeks' gestation in 2019 was attributed to pre-eclampsia and there was no follow-up of her kidney function in the post-partum period.
- In this pregnancy, she underwent a kidney biopsy at 17 weeks' gestation which showed focal segmental glomerulosclerosis.
- A diagnosis of primary FSGS was made and treatment with tacrolimus was started in pregnancy.
- The pregnancy had a successful outcome with delivery at 37 weeks.

DISCUSSION

- Previously unsuspected kidney disease may be revealed in early pregnancy and diagnosis can be made by kidney biopsy.
- Kidney biopsy should take place in early pregnancy if possible as the risk of complications from the biopsy is considerably reduced. More specifically, the risk of bleeding increases after 20 weeks' gestation.
- The relationship between FSGS and pregnancy with or without pre-eclampsia is still complex.
- FSGS can increase the risk of pre-eclampsia, pre-term delivery, and fetal growth restriction.
- FSGS may present very similarly to pre-eclampsia and thus making the appropriate diagnosis is difficult.
- Effective immunosuppression of glomerular disease may improve pregnancy outcomes.

CONCLUSION

- It is important to diagnose pre-existing kidney disease in early pregnancy to optimize the pregnancy outcome.
- Proteinuria presenting before 20 weeks of pregnancy warrants assessment for underlying kidney disease and should not be attributed to pre-eclampsia.

(No date) Kidney Imaging and biopsy in pregnancy. Available at: [https://www.akdh.org/article/S1548-5596\(20\)30076-8/fulltext](https://www.akdh.org/article/S1548-5596(20)30076-8/fulltext) (Accessed: 09 May 2023).
Author links open overlay panelOralia Alejandra Orozco Guillén 1 et al. (2019) Collapsing lesions and focal segmental glomerulosclerosis in pregnancy: A report of 3 cases, American Journal of Kidney Diseases. Available at: <https://www.sciencedirect.com/science/article/pii/S0272638619307747#~:text=The%20relationship%20between%20focal%20segmental,antiangiogenic%20factors%2C%20and%20hormonal%20conditioning> (Accessed: 09 May 2023).
Smyth, A., Radovic, M. and Garovic, V.D. (2013) Women, kidney disease, and pregnancy, Advances in chronic kidney disease. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3763929/> (Accessed: 09 May 2023).
(No date a) View of focal segmental glomerulosclerosis and pregnancy: A case report. Available at: <https://www.ijrcog.org/index.php/ijrcog/article/view/10539/6831> (Accessed: 09 May 2023).
Development of a focal segmental glomerulosclerosis after pregnancy complicated by preeclampsia: Case report and review of literature (no date) Taylor & Francis. Available at: <https://www.tandfonline.com/doi/abs/10.3109/14767058.2015.1053865?journalCode=ijgm20> (Accessed: 09 May 2023).
Kristensen, J.H. et al. (2019) Pre-eclampsia and risk of later kidney disease: Nationwide cohort study, The BMJ. Available at: <https://www.bmj.com/content/365/bmj.11516> (Accessed: 09 May 2023).