



# Syphilis: A rare but reversible cause of Nephrotic Syndrome

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## Background

Nephrotic syndrome is defined by the presence of heavy proteinuria (protein excretion greater than 3.5 g/24 hours in an adult), hypoalbuminemia (less than 3 g/dL), and peripheral edema.<sup>1</sup> Supportive treatment (protein, salt and water restriction, loop diuretics, ACE-inhibition and statins) and often steroids or immunosuppressants are the mainstay therapy. However, when an underlying cause can be identified, this could simplify therapeutic management.<sup>2</sup> An underlying cause is not always identified but when it is, it can guide appropriate management. Syphilis has wide spread clinical manifestations involving multiple organ systems and should be considered as a cause for nephrotic syndrome in patients at risk.

## Clinical Case

37 year old man with a past medical history of untreated chronic Hepatitis B, presented with left lower quadrant abdominal pain and lower extremity swelling.

He also reported nausea accompanied by non bloody emesis as well as increased urinary frequency. All symptoms had started approximately 2 weeks prior to presentation and were gradually worsening. Physical exam was notable for elevated blood pressure at 151/89, bilateral lower extremity edema up to mid calves, as well as multiple small, sub centimeter, macular lesions noted on palms and soles. Serum chemistry was notable for elevated Creatinine at 1.9 mg/dl, elevated BUN at 38 mg/dl. Hepatitis B Viral load was 9,430 IU/ml. Urinalysis was significant for proteinuria. Based on these findings, the patient was diagnosed with nephrotic syndrome. He was also diagnosed with syphilis after RPR was found to be elevated at 1:256. A CT of the abdomen and pelvis was unremarkable. The patient was given one dose of IM Benzathine Penicillin 2.4 million units and was also started on oral Entecavir for hepatitis B treatment. He was evaluated again after 2 weeks. At this time, his bilateral lower extremity swelling and abdominal pain had resolved. His previously elevated blood pressure was also within normal limits.

Serum chemistry showed that his previously elevated creatinine had now normalized. Our patient had a history of untreated hepatitis B, but it is unlikely that his renal function would have improved so rapidly after starting treatment for the same.

## Conclusion

Nephrotic syndrome is a rare but well documented renal manifestation of syphilis and is known to resolve with antisyphilitic therapy. Our case demonstrates the importance of evaluating for syphilis in a patient with newly diagnosed nephrotic syndrome without any other obvious cause.

## References

- 1) [https://www.uptodate.com/contents/overview-of-heavy-proteinuria-and-the-nephrotic-syndrome?search=nephrotic%20syndrome&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/overview-of-heavy-proteinuria-and-the-nephrotic-syndrome?search=nephrotic%20syndrome&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)
- 2) Handoko ML, Duijvestein M, Scheepstra CG, de Fijter CW. Syphilis: a reversible cause of nephrotic syndrome. *BMJ Case Rep.* 2013;2013:bcr2012008279. Published 2013 Feb 8. doi:10.1136/bcr-2012-008279