**Background**

- Focal segmental glomerulosclerosis (FSGS) accounts for approximately 40% of nephrotic syndrome in adults.
- Collapsing glomerulopathy (CG), a type of FSGS, comprises a glomerular collapse with hypertrophy and hyperplasia of the overlying visceral epithelial cells, severe tubular injury and foot-process effacement.
- Among types of FSGS, it usually has the worst prognosis, with rapid renal failure and poor response to steroids.
- CG has been associated with: infections due to viruses; autoimmune conditions; malignancies; medications and genetic mutations.
- Kidney involvement has been identified as an important feature of HIV/AIDS.
- Either direct viral effect and/or increased circulating protein CG has been associated.
- Further studies are needed to better understand the pathogenesis of CG.

**Case Presentation 1**

A 63-year-old man with a history of hypertension (HTN) was admitted with weakness and COVID-19 positive status.

- Baseline Creatinine: 2.0 mg/dL
- Admission Creatinine: 10.7 mg/dL
- UA: >600 mg/dL protein
- 24-hour urine protein: 12 grams
- Renal biopsy: Collapsing FSGS, tubular atrophy and moderate interstitial fibrosis
- APOL1 Variant Genetic testing: Positive (+)

He received supportive care while hospitalized, with hydration and close monitoring of urine output and chemistries. He was discharged with plans to start outpatient peritoneal dialysis, but his renal function continued to improve without dialysis support.

**Case Presentation 2**

A 62-year-old man with history of HTN was admitted with fatigue and fevers and found to be COVID-19 positive.

- Baseline Creatinine: 1.0 mg/dL
- Admission Creatinine: 11.6 mg/dL
- UA: >600 mg/dL protein
- 24-hour urine protein: 13 grams
- Renal biopsy: Collapsing FSGS, tubular atrophy and moderate interstitial fibrosis
- APOL1 Variant Staining: Positive (+)

He required brief treatment with hemodialysis and received high-dose steroids with improvement in serum creatinine. He was discharged off dialysis and completed a 6-month steroid taper.

**Discussion / Conclusion**

- We present two cases of CG associated with COVID-19 infection in patients with high-risk APOL1 alleles.
- One patient was treated with supportive care only and the other received steroid taper over several months.
- Both achieved partial renal recovery raising the question of the role of steroids in patients with COVID associated CG.
- Further studies are needed to better understand the behavior of the virus in renal cells, host-virus interactions and role of genetics in determining degree of renal involvement. Randomized controlled trials of steroids in this patient population would help guide therapy.

**References**