

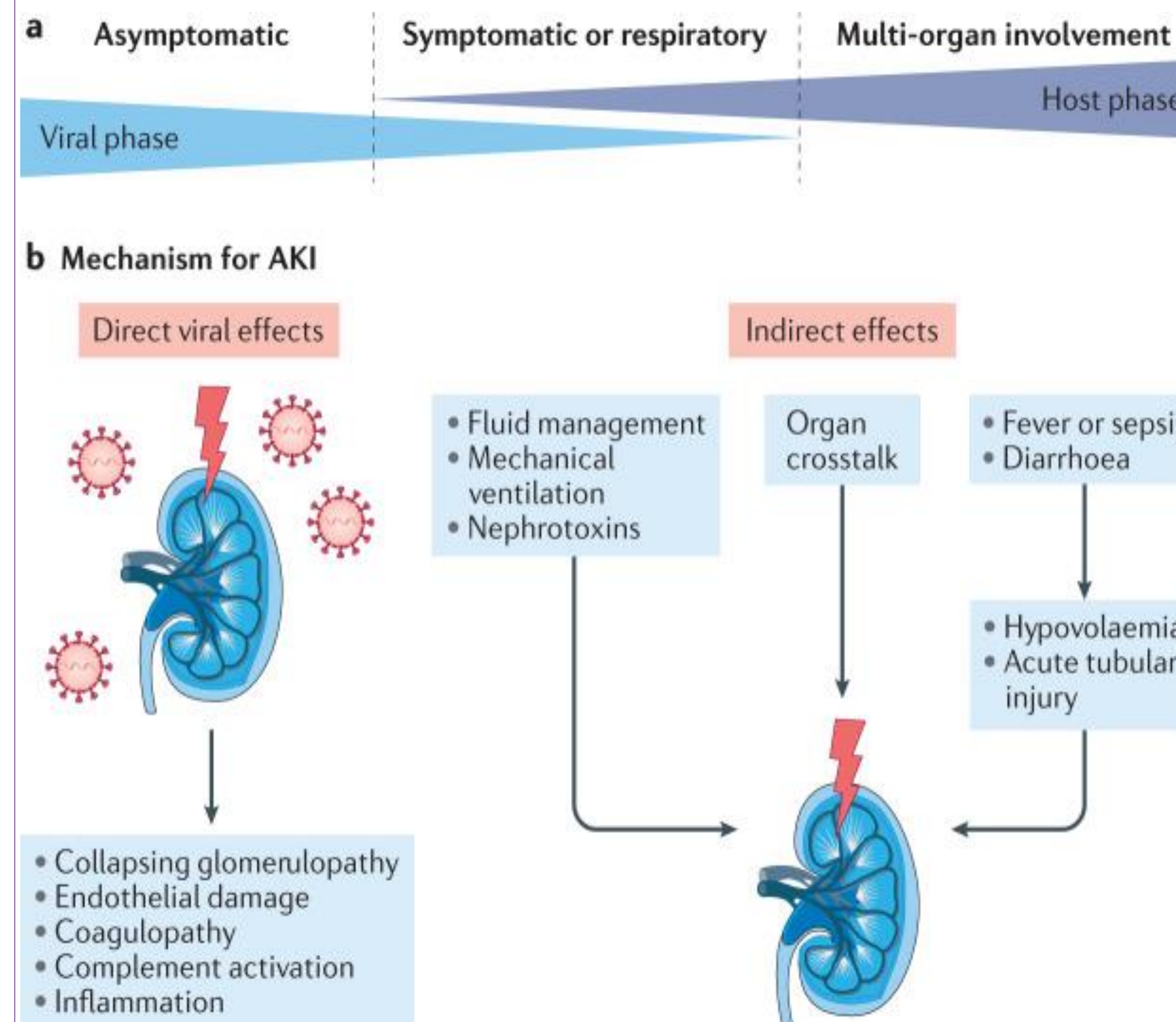
INTRODUCTION

- Acute kidney injury (AKI) is common with coronavirus disease 2019 (COVID-19) infections
- The incidence of AKI is up to ~50%, and about 20% of patients with COVID-19 will require continuous renal replacement therapy (CRRT)
- A major limitation of CRRT is premature filter clotting
- Studies show that COVID-19 patients are hypercoagulable and have increased filter clotting
- The purpose of this study is to investigate filter lifespan and average dose delivered of CRRT in patients with COVID-19 in the medical intensive care unit at Vidant Medical Center

MATERIALS & METHODS

- This is a single center retrospective cohort study
- Manual electronic chart review will be performed to obtain patient demographics, comorbidities, dates of hospitalization, dates of death, dates of CRRT initiation, time on CRRT, and average lifespan of filters
- We will also collect data on causes of filter clotting and average dose of CRRT delivered vs prescribed dose

Figure 1. Pathogenesis of COVID-19 AKI



DISCUSSION

- The primary outcome is CRRT filter lifespan during a 1-month period
- We are screening for eligibility and will collect outcome data in the upcoming semester
- With this study, we hope to better understand how filter lifespan may relate to mortality of critically ill COVID-19 patients receiving CRRT

REFERENCES

- Chan L, Chaudhary K, Saha A, et al. AKI in Hospitalized Patients with COVID-19. *J Am Soc Nephrol.* 2021 Jan;32(1):151-160. doi: 10.1681/ASN.2020050615.
- Burke E, Haber E, Pike CW, Sonti R. Outcomes of renal replacement therapy in the critically ill with COVID-19. *Med Intensiva (Engl Ed).* 2021 Aug-Sep;45(6):325-331. doi: 10.1016/j.medine.2021.02.006.
- Figure 1: Nadim MK, Forni LG, Mehta RL, et al. COVID-19-associated acute kidney injury: consensus report of the 25th Acute Disease Quality Initiative (ADQI) Workgroup. *Nat Rev Nephrol.* 2020 Dec;16(12):747-764. doi: 10.1038/s41581-020-00356-5. <http://creativecommons.org/licenses/by/4.0/>

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