



# "SCRUB TYPHUS- THE KIDNEYS 'MITE-Y' FOE ?": A TWO-YEAR EXPERIENCE OF SCRUB TYPHUS ASSOCIATED AKI FROM A TERTIARY CARE CENTRE IN SOUTH INDIA

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## Background

- Infection-related Acute Kidney Injury (AKI) is an important preventable cause of morbidity and mortality in the tropical region.
- Scrub typhus, a reemerging zoonotic bacterial infection affects about one million people annually and should be part of the differential diagnosis of acute febrile illness with AKI.
- AKI in scrub typhus is usually mild, non-oliguric, and renal recovery occurs in most patients.
- The mortality rate due to scrub typhus ranges from 1.7% to 7.92%.
- AKI and renal involvement in scrub typhus are believed to be multifactorial in origin

## Aim

- To estimate the incidence of Scrub typhus associated AKI and to evaluate the clinical profile, parameters predicting renal involvement and prognosis in scrub typhus infection.

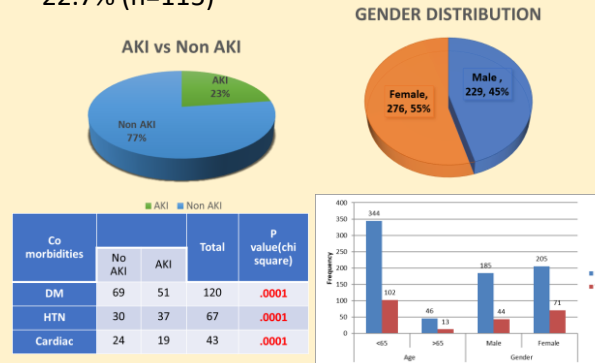
## Methodology

- Retrospective study done in a tertiary care center in Southern India
- The medical records of all patients who were admitted and treated for scrub typhus infection from January 2018 to December 2020 were analyzed.
- Demographic, clinical and laboratory data were compared between the groups and analyzed.
- Scrub Typhus infection was diagnosed by enzyme-linked immunosorbent assay (ELISA) technique and having AKI was diagnosed as per KDIGO criteria.
- The study population was divided into AKI and "no AKI" groups

## Results

- Our study included 505 patients with scrub typhus infection among whom females constituted 54.6% (n = 276) and males 45.34% (n = 229).
- The mean age of the adult population was 46.88 ± 15 years.

- The incidence of AKI in these patients was 22.7% (n=115)



	AKI		Total	P value(chi square)
	No	Yes		
Leucocytosis	125	58	183	.0001
Thrombocytopenia	85	40	125	.005
Elevated Liver	163	42	205	.312
Hyperbilirubinemia	126	70	196	.000
Hypokalemia	68	21	89	.838
Metabolic Acidosis	191	72	263	.010
Coagulopathy	16	18	34	.0001
Proteinuria	26	63	89	.0001

- Renal replacement therapy was done for **16 (13.9%)** patients among the 115 people who developed AKI.
- Mortality of patient who developed scrub typhus was **21 (4.15%)**.
- Mortality among the patients who developed AKI was higher (**7.8%**) compared to those who had no AKI (3.07%)

## Conclusion

- Scrub typhus should be considered as a differential in cases presenting with fever and AKI.
- Hypotension, bleeding diathesis, hypotension requiring inotropic support, CNS involvement, and MODS predict renal involvement.
- The incidence of AKI associated with scrub typhus in our study was 22.7%.
- Increased total counts, thrombocytopenia, hyperbilirubinemia, metabolic acidosis, proteinuria and coagulopathy predict AKI in our population.

## References

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