ISRCTN24896690 https://doi.org/10.1186/ISRCTN24896690

In elderly patients over 90 years old with acute kidney injury post-infection, does prolonged intermittent renal replacement therapy improve outcomes compared to standard therapy?

Submission date
18/08/2024

Recruitment status
No longer recruiting

Registration date
19/08/2024

Overall study status
Completed

Last Edited
19/08/2024

Condition category
Urological and Genital Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol
Background and study aims
This study investigates the effectiveness of a specialized treatment called Prolonged Intermittent Renal Replacement Therapy (PIRRT) in elderly patients over 90 years old who develop acute kidney injury (AKI) following an infection. The goal is to understand how well this treatment works in such elderly patients and to identify factors that affect their survival.

Who can participate?
The study was conducted on elderly patients aged 90 and above who developed AKI after an infection and were treated at the China-Japan Friendship Hospital.

What does the study involve?
We collected and analyzed medical data from patients treated with PIRRT over the past five years. The study focuses on their treatment outcomes and the factors that may influence their survival.

What are the possible benefits and risks of participating?
The findings suggest that nearly half of the elderly patients survived for more than 90 days after receiving PIRRT, indicating that this treatment can be effective. However, patients with pre-existing chronic kidney disease, certain complications like low calcium levels, rapid heart rates, or high potassium levels had a poorer prognosis.

Where is the study run from?
China-Japan Friendship Hospital (China)

When is the study starting and how long is it expected to run for?
June 2019 to May 2024

Who is funding the study?
This research is funded by the National Natural Science Foundation (China) (82304363)

Who is the main contact?
Dr Zheng Zhang, 88dahongmao88@sina.com

Contact information

Type(s)
Public, Scientific, Principal investigator

Contact name
Dr Zheng Zhang

ORCID ID
https://orcid.org/0000-0002-8480-1555

Contact details
No. 2, Yinghua East Street, Chaoyang District
Beijing
China
100029
+86 18811414199
88dahongmao88@sina.com

Additional identifiers

Study information

Scientific Title
Prolonged intermittent renal replacement therapy in elderly patients over 90 years old with acute kidney injury post-infection: a retrospective cohort study

Study objectives
Prolonged intermittent renal replacement therapy (PIRRT) improves clinical outcomes compared to standard therapy in elderly patients over 90 with acute kidney injury following infection.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 27/09/2016, China-japan Friendship Hospital Clinical Research Ethics Committee (2 Yinghua East Street, Chaoyang District, Beijing, 100029, China; +86 10 66937166; zryyec@126.com), ref: S2016-100-01

Primary study design
Observational

Study design

Observational single-center retrospective cohort study

Study type(s)
Efficacy

Health condition(s) or problem(s) studied
Renal replacement therapy for acute kidney injury after infection in elderly patients

Interventions
Using prolonged intermittent renal replacement therapy (PIRRT), observe patient survival time and explore the correlation between clinical factors and prognosis.

Intervention Type
Procedure/Surgery

Primary outcome(s)
Measured using patient records:
1. Age at baseline
2. Gender at baseline
3. Systolic Blood Pressure: Average all measurements taken from baseline over the next 3 days
4. Diastolic Blood Pressure: Average all measurements taken from baseline over the next 3 days
5. Heart Rate: Average all measurements taken from baseline over the next 3 days
6. Creatinine at baseline
7. Estimated Glomerular Filtration Rate at baseline
8. Urea at baseline
9. Sodium at baseline
10. Potassium at baseline
11. Calcium at baseline
12. Phosphorus at baseline
13. B-type Natriuretic Peptide at baseline
14. Hemoglobin at baseline
15. White Blood Cell Count at baseline
16. Neutrophil Count at baseline
17. Lymphocyte Count at baseline
18. Platelet Count at baseline
19. C-Reactive Protein at baseline
20. Procalcitonin at baseline
21. Prothrombin Time at baseline
22. Activated Partial Thromboplastin Time at baseline
23. SOFA Score at baseline
24. APACHE II Score at baseline

Key secondary outcome(s)
There are no secondary outcome measures

Completion date
01/05/2024

Eligibility

Key inclusion criteria

1. Patients over 90 years old
2. Acute kidney injury (AKI) due to infection
3. Received Prolonged Intermittent Renal Replacement Therapy (PIRRT)

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
90 Years

Upper age limit
150 Years

Sex
All

Total final enrolment
20

Key exclusion criteria
Does not meet inclusion criteria

Date of first enrolment
01/06/2019

Date of final enrolment
01/05/2024

Locations

Countries of recruitment
China

Study participating centre
China-Japan Friendship Hospital
2 Yinghua East Street, Chaoyang District
Beijing
China
100029

Sponsor information

Organisation
China-Japan Friendship Hospital

ROR
https://ror.org/037cjxp13

Funder(s)

Funder type
Government

Funder Name
National Natural Science Foundation of China

Alternative Name(s)
Chinese National Science Foundation, Natural Science Foundation of China, National Science Foundation of China, NNSF of China, NSF of China, National Nature Science Foundation of China, Guójiā Zìrán Kēxué Jījīn Wěiyuánhuì, , NSFC, NNSF, NNSFC

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
China

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request, 88dahongmao88@sina.com

IPD sharing plan summary
Available on request