

Predictors of mortality in the very elderly submitted to AKI

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Introduction

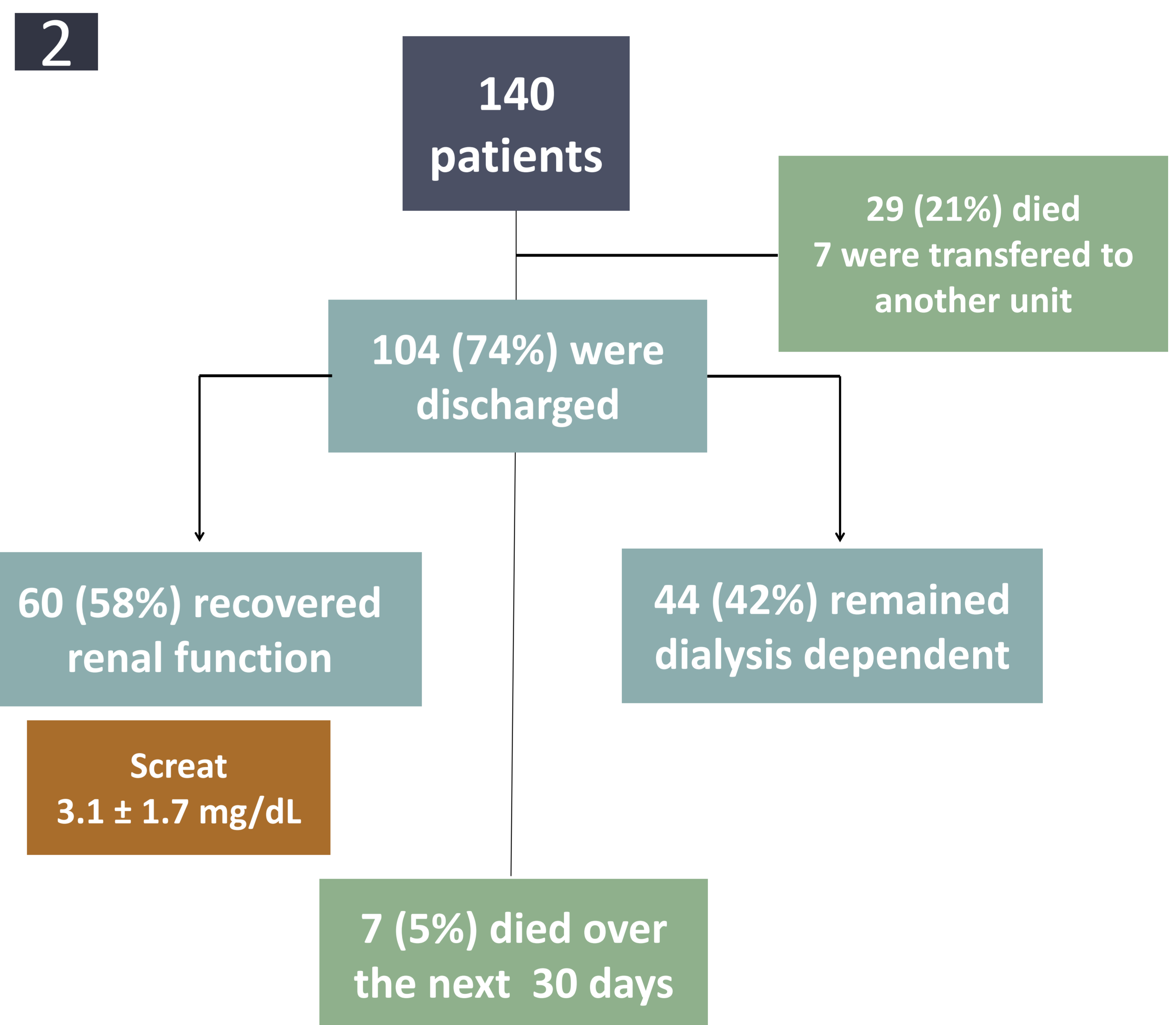
Acute kidney injury (AKI) is a deleterious event that may cause adverse long-term outcomes such as progression of chronic kidney disease (CKD), urgent need of dialysis or death. As life expectancy continues to improve, very elderly (≥ 80 years) patients become more prevalent with growing comorbidities and reduced renal reserve which make them more frail and vulnerable to any organ insult. We aimed to determine the predictors of mortality in the very elderly submitted to AKI.

Population and Methods

We retrospectively enrolled 140 patients aged ≥ 80 years old who were admitted with AKI (measured as an increase in ≥ 0.3 mg/dL or 1.5-2x their baseline creatinine). Patients were followed up to 30 days after discharge. Baseline variables, Charlson score index (CSI) and laboratory data were collected. Patients with stage 5 CKD were excluded.

Results

| 140 patients | |
|---|--------------------------|
| Female gender (n; %) | 83; 59 |
| Age (years; mean \pm SD; min-max) | 86 \pm 4 years (80-98) |
| Living in nursing homes (n; %) | 67 ; 48 |
| CSI ≥ 8 (%) | 83; 59 |
| Diabetes mellitus (n; %) | 49 ; 35 |
| Smoking habits (n; %) | 30 ; 21 |
| Infectious processes (n ; %) | 95; 68 |
| Hypotensive events (n ; %) | 80 ; 57 |
| Hospitalization days (median \pm IQR) | 12 (7-20) |
| Baseline creatinine (mean \pm SD; mg/dL) | 2,1 \pm 1,2 |
| Admission creatinine (mean \pm SD; mg/dL) | 6,1 \pm 2,6 |
| Oliguria (<400mL / 24h) | 39 ; 28 |
| Admission albumin (mean \pm SD; mg/dL) | 2,7 \pm 0,6 |



| 3 Independent predictors of mortality | | | |
|--|----------|----------------|----------------|
| Logistical Regression Model (Adjusted for age and gender) | | | |
| Living in nursing homes | OR 7.466 | [2.852-19.544] | p \leq 0.001 |
| CSI ≥ 8 | OR 3.475 | [1.325-9.116] | p=0.011 |
| Sepsis | OR 3.135 | [1.222-8.046] | p=0.017 |

- 4 Main causes of death were:
- Sepsis (n = 23 / 64%) - respiratory or urinary
 - Neoplasia (n = 7 / 19%)
 - Cardiovascular events (n = 6 / 17%)

Conclusion

We found that a higher Charlson index score, the need of living in a nursing home and the diagnosis of sepsis whether at admission or during hospitalization were independent predictors of mortality in very elderly inpatients. These findings alert us to the fragility of this particular group of patients.

References

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