5PSQ-005 UTILITY OF THE THERAPEUTIC COMPLEXITY INDEX ADAPTED TO CRITICALLY ILL PATIENTS AS A METHOD OF STRATIFICATION FOR PHARMACEUTICAL CARE

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Background and Importance Intensive Care Unit workload pharmacist providing ICU clinical services has not been optimised.

Aim and Objectives To measure the complexity of medication regimens in adult ICU and analyse the utility of this indicator as a method for patient stratification in pharmaceutical care for critically ill patients.

Material and Methods Observational, descriptive, prospective study conducted at a third-level hospital. A cross-sectional approach was employed to review treatment regimens and measure the MRC-ICU (Medication Regimen Complexity Intensive Care Unit Index) for all ICU adult patients admitted.

Demographic variables and 23 items related to each patient's treatment and clinical conditions were collected, then these items were scored as defined in table 2 of Gwynn et al. The MRC-ICU was calculated by summing the total score of the 23 items.

Results Seventy-one patients were included in the study (70% bed occupancy; 65% male), with a mean age of 58 ± 16.6 years.

Among these, six patients (8%) were classified as neurocritical, 12 with respiratory failure, 11 with traumatic injuries, 11 with coronary conditions, four postoperative cardiac patients, 17 post-lung transplants, five with septic shock and five with digestive semi-critical conditions. The average number of prescribed medications per patient was 18 ± 7.

At the time of the study, the mean length of stay was 22 ± 24 days, and the mean MRC-ICU was 13 ± 8. Respiratory failure exhibited the highest MRC-ICU (median 19; IQR 10–23), followed by post-lung transplant patients (median 17; IQR 14–23), septic shock (median 12; IQR 10–16), post-operative cardiac cases (median 10.5; IQR 9–12), and neurocritical conditions (median 9; IQR 5–14). The drugs contributing most to complexity were antibiotics, continuous perfusion sedoanalgesia, and immunosuppressants.

Conclusion and Relevance In our study, patients admitted to the ICU due to Acute Respiratory Failure or following Lung Transplantation exhibited MRC-ICU.

These patients may be considered as candidates for prioritised pharmaceutical care.

To optimise resources It would be necessary to correlate the score with the interventions performed by the pharmacist upon admission to the unit and those accumulated until discharge.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-006 FREQUENCY OF CREATININE TESTING AND ACUTE KIDNEY INJURY IDENTIFICATION AND STAGING

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Background and Importance Criteria to identify and stage acute kidney injury (AKI) establish time intervals when the serum creatinine (SCr) should increase to be considered AKI. These intervals range from 48 hours to 7 days (depending on AKIN or KDIGO criteria). Subsequently, a timely SCr test should be performed to inpatients, preferentially no longer than 48 hours.

Aim and Objectives To evaluate the impact of real-world SCr testing hospital practice for the identification and staging of AKI.

Material and Methods A historical cohort study with data from medical records of patients admitted to hospital between 1 June 2018 and 31 December 2020, was conducted. AKI stage was calculated using two criteria: AKIN and KDIGO. Identification and staging were first done considering the time intervals when the SCr increase should be identified as described in the two criteria. Then, a second staging process was conducted ignoring the time intervals and considering all the hospitalisation time. Length of stay (LoS) was calculated by adding 1 day to the difference between discharge and admission dates. Creatinine clearance was estimated using the Cockcroft-Gault equation. A list of drugs that require dose adjustment when CrCl achieves 50 mL/min was obtained from the Renal Drug Handbook 3rd edition.

Results During the study period, 17,269 hospitalisations and 62,255 SCr tests were recorded. Among the 17,032 hospitalisations with LoS >48h, 46.8% presented periods >48h with no SCr tests performed. In 3.5% of hospitalisations the patient's weight was not registered. Any stage of AKI was identified in 7.0% and in 9.1% of patients using AKI and KDIGO criteria, respectively. When ignoring time limits in both criteria, potential AKI could have occurred in 1,942 patients (11.2%). A total of 76 different drugs requiring dose adjustment in patients with eGFR ≤50 ml/min were prescribed in 78.5% admissions, and 30.3% of all admissions included patients prescribed with these drugs that reached eGFR <50 ml/min.

Conclusion and Relevance Our study suggests that real-world SCr testing hospital practice for the identification and staging of acute kidney injury may not be sufficient to identify all the AKI occurrences. Organisational or legal changes are necessary to contribute to timely use of analytic values to optimise therapy and thus increase patient safety.

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Conflict of Interest No conflict of interest.