Outcomes after Intensive Care Unit admission in cancer patients: beyond mortality

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BACKGROUND

- New cancer treatments have improved life prognosis in oncology, leading to an increasing demand for critical care attention and complexity in clinical decisions. (1)
- There is poor data regarding outcomes in cancer patients after Intensive Care Unit (ICU) admissions, beyond mortality data.

OBJECTIVE

- To assess the burden of ICU admission in cancer patients.
- To analyze the ICU mortality rate and hospital readmission rate.
- To identify the factors associated with ICU length of stay and treatment modifications in ICU cancer patients.
- To describe the outcomes and mortality in ICU cancer patients.

METHODS AND PATIENTS

- This is a retrospective study of patients with solid malignancies admitted to the Hospital Clinic of Barcelona ICU between 01/2019 - 12/2019.
- Patients with elective procedures were excluded.
- Clinical and laboratory data were collected and anonymized.

RESULTS

A total of 97 patients were enrolled:

- Clinical Characteristics
  - Age (median, IQR): 63.8 (11.7)
  - Gender: Male 52 (53.6%), Female 45 (46.4%)
  - BMI (mean): 22.8
  - Comorbidities: Hypertension 49 (50.5%), Diabetes 18 (18.5%), COPD 15 (15.4%)
  - Barthel (median): 90
  - PS months before admission: 0 22 (22.6%), 1 49 (50.5%), ≥ 2 27 (27.8%)
  - Smokers: Current/former 54 (56%), Non-smokers 43 (44%) (Figure 1C)

ICU admission characteristics

- Reason for ICU admission: The most frequent reason for ICU admission was septic shock (30% of patients) followed by respiratory failure (14%) (Table 1)
- ICU Characteristics
  - Characteristics of ICU admission: SORA 4 (60.1%), APACHE II 13 (15.1%)
  - Respiratory support: High flow nasal cannula 17 (17.8%), Non-invasive mechanical ventilation 4 (4.5%)
  - Vasoactive drugs: 40 (100%)
  - Surgical procedure: 11 (11.6%) (Table 2)

LENGTH OF STAY

- ICU length of stay was 4 days (IQR 2-6)
- Hospital length of stay was 25 days (I1-34)

Reason for ICU admission: The most frequent reason for ICU admission was septic shock (30% of patients) followed by respiratory failure (14%) (Figure 2A)

Outcomes: mortality and beyond

- Mortality rates: Hospital mortality rate was 24% and ICU mortality rate 9.4% (Figure 3)
- Readmission rates: A total of 41% of patients were readmitted to hospital in the following months (Figure 4)
- Decrease of performance status: PS and Barthel were significantly lower at discharge compared to admission (Figure 5)
- Treatment modifications: A total of 37% of patients were not able to receive any cancer treatment after ICU admission. In 29% patients disease progressed during admission. In 20% of patients needed a new line of treatment (Figure 6)

REFERENCES


CONCLUSIONS

- Patients with cancer admitted to ICU present high mortality rates and significant deterioration of PS status and Barthel Index.
- They also present high readmission rates, treatment modification requirements and definitive treatment discontinuation.