

## ABSTRACT

**Background:** Sepsis is the leading cause of death among patients on cytotoxic cancer chemotherapy. Cancer patients on active chemotherapy are at risk of infection leading to sepsis and septic shock. Mortality in patients with post cancer-chemotherapy infection is associated with sepsis defined by mortality risk scores (MRS) mainly qSOFA, UVA, SIRS and cancer and chemotherapy related immunosuppression. We set out to determine the 30-day case fatality rate and its associated factors among patients with post-cancer chemotherapy infection (PCI) at the oncology ward, Mbarara regional referral hospital.

**Methodology:** Using a cohort study design, adult patients who received chemotherapy within the last 30-days and were admitted on the oncology ward with confirmed or suspected infection requiring intravenous antibiotics, were evaluated for sepsis using three MRS (qSOFA, UVA and SIRS) and physical examination in the first 24 hours from admission. Cancer/chemotherapy history, laboratory findings and patient demographics were obtained from charts. Each patient was followed up on day 30 to determine the 30-day case fatality rate analyzed in simple proportions. Logistic regression was used to determine the factors associated with 30-day case fatality including bivariate and multivariable analysis with corresponding odds ratio,  $p < 0.05$  for statistical significance.

**Result:** Out of 150 patients mean age was 54 ( $SD \pm 17$ ) years **and** 83(55.3%) were male. Gastrointestinal cancers were the most common 63(42%) and 25(16.7%) of the patients participants were HIV positive. The 30-day case fatality rate was 42.7% (95% CI: 34.9-50.8). Factors associated with 30-day case fatality were UVA-sepsis aOR 5.7(95% CI 1.71-18.92)  $p=0.005$ , MAP<65mmHg aOR 7.8(95% CI 1.61-37.7)  $p=0.011$  and ECOG $\geq 3$  aOR 2.7(95% CI 1.05-7.01)  $p=0.039$ .

**Conclusion:** The 30-day case fatality rate was high and mortality was associated with UVA-sepsis mortality risk score, ECOG $\geq 3$  and MAP<65 mmHg.