1834P Febrile neutropenia outside of clinical trials in intermediate-risk patients receiving chemotherapy: A MASCC neutropenia, infection and myelosuppression study group-prospective, real-world study

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Background: Neutropenia is a major cause of infection-related morbidity and mortality in patients (pts) treated with chemotherapy (CT). This study investigated the febrile neutropenia (FN) and neutropenia incidence in intermediate-risk pts (FN risk of 10-20%) in real-world settings.

Methods: This MASCC real-world prospective, observational, multinational study aimed at establishing the rate of neutropenia and FN induced by CT regimens with an expected risk of FN of 10% to 20% (according to published guidelines). Eligible pts (> 18 years of age) included pts with solid tumor or lymphoma. Pts were observed for the duration of the CT (first cycle administered without FN prophylaxis) up to a maximum of 6 cycles. Primary endpoint was incidence of FN after the first CT cycle. Other endpoints included incidence of FN in subsequent cycles, incidence of neutropenia following cycle 1 and subsequent cycles.

Results: The current preliminary analysis included 340 intermediate-risk pts (out of 371 eligible pts registered) with solid tumor or lymphoma. In total 1502 cycles of CT were administered and analyzed. The median age was 58 years (18-83), including 225 females and 115 males. Metastatic disease was documented in 100 (29%) pts. Weight loss of less than 5% was documented in 265 (78%) pts. Dose reductions occurred in 75 (22%) pts and delayed in CT administration 146 (43%) pts. The overall incidence of FN was 13% and grade 4 neutropenia of 23%. The overall incidence of neutropenia episodes in cycle 1 were 77 (23%) with a 95% confidence interval (CI) 18-28% and grade 4 neutropenia in 38 (11%) pts with a 95% CI 8-15%. Additional results are shown in the table.

Table: 1834P Neutropenia and febrile neutropenia incidence

Neutropenia for all cycles	Totals and %	95% Confidence Intervals
Grade 1	76 (22%)	
Grade 2	64 (19%)	
Grade 3	59 (17%)	
Grade 4	73 (21%)	
Grade 4 in at least 1 cycle	56 (16%)	13%-21%
Febrile Neutropenia		
Cycle 1	19 (6%)	3%-9%
Total episodes for all cycles	42 (13%)	
Pts with FN in at least 1 cycle	32 (9%)	7%-13%

Conclusions: FN remains a significant problem in cancer intermediate-risk pts undergoing CT. An analysis of the risk factors for FN and neutropenia will be presented at the time of the meeting.

Clinical trial identification: MASCC Neutropenia, Infection & Myelosuppression Study Group - FN01.

Legal entity responsible for the study: The autors.

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1835P Effect of serum uric acid (ua) level and MASCC risk score on febrile neutropenia mortality

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Background: The study was aimed to evaluate the effect of UA level on the 30-day mortality of patients admitted to the hospital with a complaint of FEN. The secondary aim was to evaluate the use of combining serum UA levels with the MASCC score.

Methods: Between January 2016 and May 2019, the files of patients with a diagnosis of febrile neutropenia were retrospectively evaluated, the data of MASCC risk score and serum UA levels at the time of admission were recorded. All patients, who received at least one course of chemotherapy and were diagnosed with febrile neutropenia (FEN), were included in the study population. Patients were divided into four subgroups according to the low/high MASCC risk score and normal/increased level of UA. The 30-day mortality rates of these four groups were compared. The clinical parameters that may affect mortality of FEN were also evaluated.

Results: A total of one hundred and eighteen febrile neutropenia (N = 118) episodes were included in the study and 17 (14%) of these patients died. While this rate is 23% in the high-risk group according to the MASCC score, it is 7% in the low-risk group (p 0.011). The 30-day mortality rate of patients whose level of UA higher than normal ≥ 7 mg/dl compared with UA level normal patients were 50% vs 11%, respectively (p < 0.001). In multivariate analysis of the parameters that significantly effect the 30.th day MASCC risk score (OR: 4.28, CI 95% 1.19-15.39, p=0.013) and having a level of serum UA > 7 mg/dl (OR: 4,46, CI 95% 1.19-15.38, p=0.032) was significantly increased the risk of in 30-day mortality of FEN. The rate of 30-day mortality of FEN was 100% in patients with low MASCC risk score and UA level compared with 50% in the MASCC risk score high and high UA level group and the difference was statistically significant (p <0.001).

Conclusions: Increased level of UA at time of FEN diagnosis was independently associated with increased rate of 30.th day mortality of FEN. The combination of the MASCC risk score with serum UA level might be thoroughly predicts the 30.th day mortality of FEN.

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1836P Bacteraemia in cancer patients: An adverse prognostic factor and the relationship with chemotherapy

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Background: Bloodstream infection is a cause of morbi-mortality in cancer patients. The study aimed to clarify if bacteraemia in cancer patients is associated with higher mortality rates and to alert the community to this emerging problem.

Methods: The authors collected every cancer patient hospitalized in our cancer centre, who developed bacteraemia during their stay in hospital or at admission in the last 9 years. Data was treated with SPSS (t-student test, pearson correlation coefficient, bivariate analysis and Kaplan-Meier Curve). *P* values <0.05 were considered to be statistically significant.

Results: A total of 204 bloodstream infections were reported, with positive cultural isolations. Almost half of the patients had gastrointestinal cancer (49%), followed by breast cancer (15,5%). Males were predominant (54,4%) and the median age was 66 years old. Catheter totally implanted (CTI) was responsible in 38,7% of the cases, and 28,9% had no identified focus. The responsible microorganism was *E. coli* in 24,5%, followed by *S. aureus* in 14,7% of the infections. From all bacteria, 20,5% were multidrug-resistant bacteria and 48% were resistant to at least one antibiotic. *S. aureus* was meticilin-resistent in 37% of infections and 4% were carbapenemase producing organisms. From all patients included in the study, 61,5% received chemotherapy the month before the infection. The survival of the patients that received chemotherapy was significantly different from patients that did not, t(203)= 2,06, *P*=0,04. Chemotherapy the month before was correlated with lower survival rates, r(203)=-0,15, *P*=0,03, and Kaplan Meyer curve showed a tendency to statistical significance (*P*=0,06). The stage of the oncologic disease was not associated with the mortality of the patient (*P*>0,05). The infection contributed or was the cause of death in 45% of the patients. The 3-month mortality rate of the patients that had bacteraemia was 74,5%.

Conclusions: There are no guidelines regarding prescription of antimicrobial therapy in cancer patients or in palliative care. Three quarters of the cancer patients that suffer from bacteraemia died within 3 months, and active chemotherapy treatment was associated with lower survival rates. CTI was the main source of infection.