3069 POSTER

Granulocyte Colony-stimulating Factors (G-CSF) Use in Clinical Practice: PoloNord Group Registry-Based Cohort Study

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Background: G-CSFs are widely used to reduce myelotoxicity of chemotherapy (Th) and to allow its regular administration. National and International Guidelines (GU) recommend their use. The aim of the study is to evaluate G-CSF, Pegfilgrastim (PEG) and Filgrastim/Lenograstim (FL), *patterns of use* in clinical practice (CP), comparing their *adherence* to AIOM (Medical Oncology Italian Association) GU, *effectiveness* and *tolerability*.
Materials and Methods: Data from 622 consecutive patients (pts), receiving G-CSF for the first time during a line of Th, were enrolled from 09/2008 to 11/2010, in 10 Lombardy Italian cancer centers. Data recorded by 2882 follow-up (FU), corrisponding to Th cycles: age, neoplastic disease and stage, Th regimens, febrile neutropenia risk (high or low) according to pts risk factors, blood counts, kind of G-CSF and patterns of use, febrile neutropenia (FN), G3−4 neutropenia, hospitalization due to infections (HDI), dose reduction (DR), Th delay (ThD) and bone pain.
Results: *Patterns of use*: primary prophylaxis (722 FU) PEG 43% vs FL 57%; secondary prophylaxis (1340 FU) PEG 14% vs FL 86%; therapeutic use (356 FU) FL only. Mainly G-CSF supported neoplastic diseases (622 pts): breast cancer (B) 229 (37%), lung cancer (L) 102 (16%) and lymphomas (LY) 71 (11%), but with different use modality: B $\rightarrow$ main use in adjuvant therapy (141; 62%), to guarantee dose intensity in pts at low risk of FN (137; 60%); L/LY (102/71 pts) $\rightarrow$ main use in advanced disease (L90%, LY100%), to support pts at high risk of FN (L72%, LY69%).
Adherence to GU: Primary prophylaxis: PEG 75% (64/85pts) vs FL 55% (53/97pts) ($p = 0.006$); Secondary prophylaxis: PEG 16% (10/64pts) vs FL 25%(78/313pts), but PEG 59% (38/64pts) vs FL 63% (197/313pts) including pts at high risk of FN; Timing start G-CSF: PEG 501/504 FU, 99% vs FL 972/1558 FU, 62% ($p < 0.00001$).
Effectiveness (PEG 504, FL 1558 FU): FN rate: PEG 8 (1.6%) vs FL 11 (0.7%) (p:NS); G3−4 neutropenia rate: PEG 30 (6%) vs FL 110 (7%) (p:NS); HDI: PEG 5 (1.0%) vs FL 4 (0.25%) (p:NS); DR: PEG 8 (1.6%) vs FL 64 (4.1%) (p:NS); ThD: PEG 13 (2.6%) vs FL 77 (5%) (p:NS).
Bone pain: PEG 37/504 (7.3%) vs FL 109/1914 (5.7%) (p:NS).
Conclusions: Results suggest the high G-CSFs effectiveness and tolerability in CP, where their use is extended beyond GU recommendations to support pts at high risk of FN and to guarantee dose intensity. The use of PEG as primary prophylaxis and timing start fits to GU more than FL, but no significant difference was found in terms of effectiveness and tolerability.

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Supportive Care: What Works for Teenagers and Young Adults?

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Background: Teenagers and Young Adults (TYAs) are often referred to as 'the lost tribe'. Due to their life stage they are vulnerable to external pressures and influences, both as young people and as cancer patients. They are neither children not adults and require very different services and interventions to help them negotiate these very age specific difficulties when they are going through the cancer trajectory.
Methods: On the Young Oncology Unit at The Christie in Manchester an age appropriate psycho-social service, both on the ward and in the community, has been developed over recent years. The ward service is holistic in its approach and involves a number of professionals including youth workers, complementary therapists, music therapists, art therapists and work shop facilitators. Externally a number of different initiatives have been developed including social support groups, residential activity, service user groups, survivors groups and programmes and support services for family members and carers of TYA patients.
Results: The purpose of these services is to support young people and their families at a very difficult time. The services focus on TYAs as individuals and young people rather than as cancer patients. The approach strives to maintain young people as they were before being diagnosed and focus' on peer interaction and engagement, age appropriate activities that reinforce confidence building and self esteem and enabling TYA patients to continue to function as a young person.
Conclusions: Services continue to grow and advance and the model that has been used can be considered to be successful in that it engages many young people, both in the hospital environment and in the community.

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Risk of Anaemia With Targeted Therapies − a Meta-analysis of Randomized Trials in Solid Tumours

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Background: Cancer patients suffer frequently of anaemia. Usually anaemia is both treatment- and disease- related. The risk of anaemia associated with targeted therapies is still unexplored. We did a meta-analysis to determine the incidence and the relative risk (RR) of anaemia associated with the use of biological agents.
Material and Methods: We analyzed all published randomized controlled (phase II-III) trials comparing targeted agents (alone or in combination with chemotherapy) with standard therapies alone in solid tumours. RevMan v 5.1 (Cochrane IMS) has been used for statistical analysis.
Results: A total of 46 studies were retrieved for this meta-analysis. Overall the incidence of all grade anaemia is 32% for grade [G] 1−2 and 6% for G3−4. The RRs of G1−2 anemia are in particular 1.11 ($p = 0.03$), 1.12 ($p = 0.002$) and 1.13 ($p = 0.09$) respectively for all trials pooled together, biologic agents alone and studies including targeted therapies in combination with chemotherapy agents. The risk is higher for erlotinib (RR 1.33), gefitinib (RR 2.88), sunitinib (RR 1.09), trastuzumab (RR 1.23) and mTOR inhibitors (RR 1.13) and lower for bevacizumab (RR 0.73). The analysis was also stratified for the underlying malignancy and only breast cancer trials were associated with an increased risk (RR 1.11; $p = 0.04$).
Conclusion: Anaemia with targeted therapies is a common event reported in clinical trials, in particular when these agents are prescribed as monotherapy. The treatment is supportive only because no treatment is actually approved. In the future the extension of label of erythropoietic stimulating agents with this indication could be considered.

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Impact of Adherence to Antiemetic Regimens on Outcome of Nausea and Vomiting Control Among Asian Breast Cancer Patients Receiving Anthracycline-based Chemotherapy

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Background: Non-adherence to oral anticancer agents has been identified as a prevalent behavior amongst breast cancer patients. However, the prevalence of non-adherence to outpatient antiemetic regimens that are prescribed for delayed emesis prevention in breast cancer patients is limited in the literature. Hence, this study was conducted to evaluate the impact of adherence to delayed antiemetic regimens on chemotherapy induced nausea and vomiting (CINV) control in breast cancer patients, and to identify patient characteristics that may be associated with non-adherence to antiemetic regimens.
Methods: This was a prospective, observational study conducted at the largest ambulatory cancer center in Singapore from December 2006 to January 2011. All breast cancer patients receiving anthracycline-based chemotherapy and standardized outpatient antiemetic regimens were recruited. On the day of chemotherapy, patients were given a standardized 5-day diary to document their emesis events and their demographics obtained via interview. Pearson Chi-square test and multiple logistic regression were performed to analyze the impact of adherence on CINV control.
Results: A total of 361 eligible patients were included in the final analysis (mean = 50.0±8.9 years). Majority of the patients were Chinese (80.1%) and diagnosed with Stage 2 and above breast cancer (88.1%). Almost half of the patients (42.1%) were non-adherent to their prescribed delayed antiemetics regimens, with dexamethasone usage being the least adhered to (non-adherence: 37.4%). After adjusting for potential confounders (ethnicity, education level and stage of disease), patients who were adherent to antiemetics were more likely to achieve complete CINV control (defined as no emetic episodes, no nausea, and no rescue therapy required) than patients who were non-adherent (NNT=9.6; Adjusted OR=1.74, 95% CI: 1.01–3.01). In addition, young women aged between 21−40 years old, pursued higher education, and diagnosed with Stage 1 breast cancer were associated with non-adherence to antiemetics ($p < 0.05$).