

Conclusion and relevance Electronic prescription and pharmacist validation allowed us to detect potential medication errors, promoting patient safety in vaccine administration. This circuit is applicable to all hospitals with an EPP and should allow them to detect and prevent potential medication errors.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-149 DRUG INTERACTION IN BREAST CANCER TRIPLE NEGATIVE THERAPY: DOCETAXEL AND FLUVOXAMINE. A CASE REPORT

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10.1136/ejhp-pharm-2021-eahpconf.268

Background and importance To alert clinicians to the potential problems of combining docetaxel (and taxanes in general) with fluvoxamine.

Aim and objectives To report a live conditioning interaction between docetaxel and fluvoxamine in a breast cancer patient.

Material and methods A 60-year-old woman (60 kg, 164 cm) was diagnosed with triple negative right breast ductal carcinoma (TNM stage T1N0M0). The treatment plan consisted of four cycles of neoadjuvant chemotherapy with cyclophosphamide 600 mg/m² and epirubicin 95 mg/m² (EC) biweekly, four cycles of carboplatin AUC5 and docetaxel 75 mg/m² followed by pegfilgrastim 6 mg on day +2 and surgical intervention. After completion of the EC scheme, the patient showed haematological tolerance and clinical improvement. The patient completed the first dose of the carboplatin-docetaxel regimen with proper tolerance. However, before the second cycle, the patient experienced syncope, asthenia and hyporexia. A complete blood count (CBC) was performed at the second consult, showing that the patient was in range to receive chemotherapy. However, due to the syncopal episode and suspicion of neutropenia on that day, the oncologist decided to decrease the dose of docetaxel to 70 mg/m². On day +9, the patient presented to the emergency room with a recurring syncopal episode and neutropenia, and was admitted with septic shock. Blood cultures were obtained and were positive for *Pseudomonas aeruginosa*. Meropenem was started. Furthermore, it was discovered that the patient had started taking fluvoxamine as an antidepressant the same day she started the first cycle of docetaxel-carboplatin. The interaction between docetaxel and fluvoxamine was assimilated, and fluvoxamine was discontinued and exchanged for mirtazapine.

Results Fluvoxamine is an inhibitor of the CYP3A4 isoenzyme. Docetaxel is metabolised through CYP3A4, and the concomitant use may increase concentrations, leading to toxicity. Although the score was 4 (possible) for the drug interaction probability scale, if pharmacokinetic analysis had been performed, we could have proven that the AUC of docetaxel had reached toxic levels.

Conclusion and relevance Although SSRIs are often prescribed to combat depression, in breast cancer patients they can also be used to control hot flushes. It is mandatory to avoid using SSRIs that are metabolised through CYP3A4, such as fluvoxamine, fluoxetine, paroxetine, sertraline and venlafaxine

in the setting of docetaxel. Therefore, it would be best to recommend SSRIs such as mirtazapine, citalopram and escitalopram.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-150 DISSEMINATED INTRAVASCULAR COAGULATION AFTER PD-1 BLOCKADE WITH NIVOLUMAB IN ADVANCED MELANOMA: A CASE REPORT

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10.1136/ejhp-pharm-2021-eahpconf.269

Background and importance Immune checkpoint inhibitors (ICIs) represent a milestone therapy in many types of cancer, such as melanoma. Nivolumab is a programmed death receptor-1 (PD-1) blocking antibody with antitumour activity in melanoma. Only a few studies have investigated the relationship between ICIs and disorders of the coagulation-fibrinolysis system.

Aim and objectives To report a case of disseminated intravascular coagulation (DIC) in a metastatic melanoma patient treated with nivolumab. A 50-year-old woman was diagnosed with melanoma stage IB and resected in 2008. In December 2019, she relapsed (pulmonary and intracardiac metastasis). Then, she underwent treatment with nivolumab 240 mg/14 days, 14 cycles (last cycle 26 June 2020), with greater tumour partial response. During the last nivolumab cycles she had asthenia and thrombocytopenia and nivolumab was stopped. She was treated with methylprednisolone, but low platelet count persisted and she had extensive haematomas. She was admitted to hospital on 27 July due to probable DIC as an immune related adverse event (IrAE).

Material and methods Laboratory tests on admission showed grade 3 thrombocytopenia ($36 \times 10^9/L$ platelet count) and disordered coagulation (35 mg/dL fibrinogen, 75 468 ng/mL D-dimer). International normalised ratio for prothrombin time and activated partial thromboplastin time were in the normal range. PCR for SARS coronavirus screening and blood tests for mycobacteria were both negative.

Results The patient was treated with fibrinogen. There was no evidence of tumour progression or signs of infection. Furthermore, the patient had no history of other blood disorders, and there were no signs of trauma or sepsis. She was diagnosed with DIC related to nivolumab and she received gamma globulins, fresh frozen plasma and platelet transfusion with negative clinical evolution; so, she began treatment with infliximab and methylprednisolone pulse, without signs of bleeding, except for the persistence of haematomas and low levels of fibrinogen and platelets. The patient's condition deteriorated, and platelet count decreased despite therapy with fibrinogen, anticoagulants, transfusions of blood and antibiotic-antifungal therapy. Finally, the patient showed neurological damage related to cerebral haemorrhage due to the low platelet count and she died in hospital.

Conclusion and relevance Disseminated intravascular coagulation had the highest proportion of death outcomes among the top 10 most frequently reported ICI associated haematological IrAEs. For this reason, clinicians need to be careful, paying

special attention during ICI treatment. This case report suggests a direct relationship between immunotherapy and disorder coagulation events; however, this cannot always be demonstrated but the diagnosis was made by exclusion. Therefore, extensive research in relation to haematological IrAEs and ICIs are necessary.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-151 SEVERE TOXICITY IN A PATIENT WITH ACUTE LYMPHOBLASTIC LEUKAEMIA RESULTING FROM SUBSTITUTION OF DAUNORUBICIN WITH DOXORUBICIN DUE TO MEDICINE SHORTAGE: A CASE REPORT

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10.1136/ejhp-harm-2021-eahpconf.270

Background and importance We present the case of a young patient with T lymphoblastic lymphoma (T-LBL) who developed severe toxicity after receiving an anthracycline based protocol that is generally well tolerated by healthy patients. We assume that the substitution of daunorubicin by doxorubicin due to a nationwide shortage of daunorubicin played a crucial role in developing severe toxicity.

Aim and objectives The 19-year-old man with no previous illnesses was diagnosed in December 2019 with T-LBL, a rare, aggressive neoplasm of precursor T cells that progresses rapidly and requires prompt diagnosis and medical intervention. T-LBL shows morphological and immunophenotypical similarities to acute lymphoblastic leukaemia (ALL). T-LBL treatment is the same as for ALL.

Material and methods The induction protocol consisted of dexamethasone, vincristine, daunorubicin and pegasparginase. Due to a nationwide shortage, daunorubicin (30 mg/m²) was substituted by doxorubicin (25 mg/m²).

Results Chemotherapy was initially well tolerated, but beginning on day 15, the patient developed pronounced mucositis and increased skin toxicity (hand-foot syndrome, grade IV). Moreover, coagulation parameters deteriorated, and repeated transfusions with erythrocytes and platelet concentrates were needed. After administration of pegasparginase on day 31, liver values increased, and finally, the patient had to be transferred to the intensive care unit due to fulminant pancreatitis. After 3 days, the patient could be transferred back to our ward. However, within 2 weeks, the patient developed sensory disturbances in all extremities, which was classified as chemotherapy associated polyneuropathy.

In the further clinical course, the patient's general condition improved, and PET-CT showed complete metabolic remission. Due to the severe chemotherapy associated side effects, intensive consolidation treatment, according to the protocol, was cancelled. Instead, a consolidating therapy with nelarabine was carried out without complications. To date (October 2020), the patient is in a good clinical condition and has not developed disease recurrence. Probability assessment using the Nar-anjo algorithm resulted in 'probable adverse drug reaction' (score=6).

Conclusion and relevance Our case report underlines the fact that shortages of essential anticancer drugs can have a particular impact on the efficacy and safety of established chemotherapy regimens, as these medicines often have few or no proven effective alternatives.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of interest No conflict of interest

5PSQ-152 REAL WORLD EFFICACY AND COST DATA ON PATIENTS WITH METASTATIC NON-SMALL CELL LUNG CANCER TREATED WITH CHECKPOINT INHIBITORS IN AN ITALIAN UNIVERSITY HOSPITAL IN SEPTEMBER 2016–2020

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10.1136/ejhp-harm-2021-eahpconf.271

Background and importance Non-small cell lung carcinoma (NSCLC) accounts for 85–90% of all forms of lung cancer. In recent years, the development of immune checkpoint inhibitors has completely changed the therapeutic landscape of NSCLC and changed treatment standards. Immuno-oncology is a promising therapeutic option based on the use of synthetic antibodies, such as nivolumab and pembrolizumab which can both improve the survival of patients. All this represents a valid new approach, but the high cost requires a specific evaluation of health outcomes.

Aim and objectives The main aim of this retrospective observational study was to analyse the characteristics of NSCLC patients, treatment outcomes and costs of treatment of advanced stage NSCLC with nivolumab and pembrolizumab in an Italian teaching hospital in a cohort of 102 selected patients.

Material and methods A retrospective observational analysis was conducted in patients treated with immune checkpoint inhibitors from September 2016 to September 2020 at the university hospital 'Mater Domini' in Catanzaro, Italy. Data sources were medical records, internal prescription cards and reports of adverse reactions.

Results 102 patients (89.2% men) were diagnosed with advanced NSCLC, 69.6% characterised by a non-squamous histology and 30.4% squamous. Firstline treatment with pembrolizumab was administered to 53 patients for an average of 11.5 months, 9 of whom were receiving innovative treatment with pembrolizumab+pemetrexed as firstline treatment with an average annual patient cost of 4915.78€, while 49 patients were treated with nivolumab for an average of 16.5 months with an average annual patient cost of 11 306.08€. The data showed a survival rate of 64.8% after 12 months, 57.9% after 24 months and 48.1% after 36 months. Most patients received immunotherapy as firstline and the others as subsequent treatment.

Conclusion and relevance Currently, there are numerous clinical studies for NSCLC but no study has compared immunotherapy treatments. From this study, based on real world data,