Background and importance The optimal dose of anticancer drugs is the one that produces the maximum antitumuor effect associated with an acceptable level of toxicity. Low doses will be ineffective against cancer, while high doses will produce intolerable toxicity, especially in children.
Aim and objectives The purpose of this study was to evaluate and analyse the compliance of dosages related to children anticancer drugs underdose or overdose.
Material and methods It was a retrospective study based on the recalculation of doses of 270 prescriptions of cytotoxic drugs in the paediatric hemato-oncology department of Rabat.
Results The anticancer drugs most often used are vincristine (21.5%), cyclophosphamide (14.4%), mercaptopurine (10%), methotrexate (7.8%), etoposide (6.7%), other drugs (39.6%).

Of 270 recalculated doses of anticancer drugs, 67.8% were compliant, 27.4% were underdosed and 4.8% were overdosed.

45.1% of deviation cases were not justified, 33.3% of the doses were rounded off, 9.6% represented the maximum that can be administered, 8.6% were calculated according to weight and not by body surface area, and 3.2% were for children in denutrition.

Concerning the recorded underdoses, the maximum deviation noted was 47.3% with an average of 14.7% compared to the therapeutic dose. For the overdoses, the maximum deviation was 41.6% with an average of 4% compared to the therapeutic dose.

Based on the number of drugs with anomalies, the most underdosed drugs were cyclophosphamide (17.5%) followed by vincristine (16.2%) then etoposide (13.5%). Conversely, the most overdosed drugs were mercaptopurine (23%) followed by methotrexate (15.3%).

Based on the average deviation between prescribed and therapeutic doses, the most underdosed drugs were high-dose methotrexate (35%), mercaptopurine (28%) and adriamycin (26%), whereas the most overdosed drugs were vincristine (42%), mercaptopurine (9%) and high-dose methotrexate (6%).

The interventions made by pharmacists in cases of dose deviations were to recalculate the prescribed doses and inform the prescribing physician either to detect a possible error of overdosing in order to correct it or to look for the reason for underdosing if this is not mentioned on the chemotherapy preparation sheet.
Conclusion and relevance According to the results, almost half of the anomalies are unjustified, hence the importance of pharmaceutical validation of chemotherapy orders and dose compliance verification by the hospital pharmacist to better manage anticancer drugs risks.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-033 POSITIVE IMPACT OF AN IMPLEMENTED WARD PHARMACIST IN A MULTIPROFESSIONAL CANCER CARE TEAM IN GERMANY

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Background and importance There is an increasing demand for better management of patients due to high numbers of newly diagnosed cancer patients and increasing complexity of chemotherapeutics. Pharmacists are able to ensure patient's safety and quality of life.[1]
Aim and objectives The objective of this intervention study was to evaluate the benefit of a pharmacist embedded in a multiprofessional cancer care team on an oncology ward of a maximum care hospital with >1000 beds in Germany.
Material and methods The present study, conducted from 2020 to 2021, was a single-centre, controlled, retrospective and prospective intervention study consisting of three different phases P_0, P_1 and P_2 with a duration of 3 months each. P_0 represented the retrospective control phase as there was no pharmacist on ward. In the prospective phases P_1 and P_2, the ward pharmacist determined, documented, and solved medication errors (MEs) as part of their daily work. ME was defined as any unintentional mistake in prescription of drugs. MEs can result in avoidable adverse drug events. In P_2, newly developed medical standards exist to allow the pharmacist to work in a more structured environment. Throughout all phases, two clinical pharmacists independently identified all MEs which they detected from archived medical files (P_0) or electronic patient records (P_1 and P_2). The classification as clinically relevant ME was set after confirmation by an oncologist to ensure clinical relevance.
Results The three phases with 52, 46 and 50 patients, respectively, were comparable regarding the baseline characteristics. For better comparability the MEs refer to the number of medication lines (ML) which comply with one drug per day. The statistical analysis showed a significant reduction of clinically relevant MEs (P_0: 34 MEs/100 ML vs P_1: 8 MEs/100 ML vs P_2: 2 MEs/100 ML; $p<0.001$) for all phases.
Conclusion and relevance The implementation of a ward pharmacist had a significant impact on the reduction of MEs and consequently increased the patient's medication safety. Although these results cannot be easily transferred to other disciplines, the present study clearly shows the benefit of a ward pharmacist in oncology together with oncology-related services (eg, preparation of cytostatics) offered by the hospital pharmacy.

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5PSQ-034 HOMOGENEITY OF OPINION EXPERT ON CLEO SCALE WHEN APPLIED TO 50 MODELLED PHARMACEUTICAL INTERVENTIONS

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Background and importance The CLEO Scale is a three-dimensional tool to assess the clinical, economic and organisational impact of pharmacists' interventions (PI) which would resolve drug-related problems in prescriptions.

AVICENNE is an advanced real-time pharmaceutical decision support system based on the patient's data, pharmaceutical algorithms and Pharmaclass (Keenturtle) which enhances the PI relevance.

Aim and objectives This study aimed to analyse the reliability of the CLEO scale.

Material and methods From the 171 modelled clinical situations in Pharmaclass, the 50 most frequent were chosen. For each situation a PI was retrospectively and randomly selected between November 2019 and November 2020 in the AVICENNE database. It contained 1263 PI transmitted after of Pharmaclass alerts' analysis in two 1700 beds health facilities.

A multiprofessional panel of 11 clinicians have rated independently the PIs using the CLEO scale. CLEO evaluates the clinical, economical and organisational impact of PI. The panel re-rated the PIs after a 1-month washout period.

Intra-class correlation coefficients in absolute agreement on single unit ($ICC_{A,1}$) are calculated using the 'Psych' package on Rstudio to measure inter- and intra-rater reliabilities of the panel.

Results The PIs were rated as having a minor, medium, major or vital clinical impact in, respectively, 10%, 70%, 16% and 4% of situations.

Direct drug management costs were reduced by the PI in 24%, unchanged in 62% and increased in 14% of the situations. The care process did not change in 78% of the situations, 20% of PIs improved it and 2% of PIs altered it. On average less than 3 min are needed per evaluation.

Inter-rater reliability ($ICC_{A,1}$) was poor for clinical ($ICC_{A,1}$ = 0.297) and organiaational ($ICC_{A,1}$ = 0.338) dimensions and moderate for economic dimensions ($ICC_{A,1}$ = 0.665). Intra-rater reliability was moderate for clinical ($ICC_{A,1}$ = 0.611) and organisational ($ICC_{A,1}$ = 0.726) dimensions and excellent for economic dimensions ($ICC_{A,1}$ = 0.914).

Conclusion and relevance Almost all of AVICENNE PIs prevent a temporary or permanent damage or the need of care to reduce their gravity. The CLEO tool offers a limited validity when used by untrained clinicians. Symbolic artificial intelligence reinforces the therapeutic safety of patients and the relevance of care.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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5PSQ-035 INTENSIFICATING THERAPY WITH USTEKINUMAB IN NON-FIRST-LINE CROHN'S DISEASE: CLINICAL EXPERIENCE, SAFETY AND EFFECTIVENESS IN THE 'REAL WORLD'

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Background and importance Ustekinumab is a real option for treating Crohn's disease (CD) refractory to anti-t*umour necrosis factor (anti*-TNF) drugs. After a first intravenous dose, it is administered as a subcutaneous maintainance dose every 8–12 weeks.

Some observational studies display that a dosage interval shortening (DIS) may improve clinical results in patients with partial response or early exhaustion of response between different doses.

Aim and objectives Quantifying proportion of patients treated with ustekinumab who require DIS.

Assessing effectiveness and safety of DIS with ustekinumab in refractory CD.

Material and methods We conducted an observational and retrospective research study in adult patients with CD refractory to anti-TNF drugs. Patients started treatment with ustekinumab, firstly intravenous 6 mg/kg, and then subcutaneous 90 mg every 8 weeks. Included in the study were patients with DIS in June 2019–February 2021, with later follow-up of at least 6 months.

Effectiveness: assesed with clinical remission (CRem), defined as obtaining a Harvey–Bradshaw Index (HBI) <4, and clinical response (CResp), defined as a reduction of >3 points in HBI with respect to baseline. Both endpoints were evaluated at 3 and 6 months.

Tolerance/safety: determined at 3 and 6 months. Every discontinuation or adverse event will be notified.

Results Data of 41 patients (21 men) treated with ustekinumab for at least 1 year were obtained. Population had a median of 1.6 previous biological treatments. 15 patients have maintained the initial regimen with ustekinumab. However, 26 patients (63.4%) needed DIS, for partial response (17/26; 65.4%) or early exhaustion of response (9/26; 34.6%). 16 of these had data after DIS of at least 6 months: 7 patients had a dose every 6 weeks, and 7 had a dose every 4 weeks.

CRem was obtained in 10 patients (62.5%) at 3 and 6 months. CResp was reached in 5 patients (31.2%) at 3 months and in 7 patients (43.7%) at 6 months. 2 patients stopped the treatment for ineffectiveness. There were no adverse events or discontinuations for safety reasons associated with DIS.

Conclusion and relevance A high number of patients have required DIS with ustekinumab. DIS of ustekinumab has shown high safety and ability for rescuing a substantial percentage of patients with partial response or early exhaustion of response. Effectiveness results are similar at 3 and 6 months after intensification, which might be important for making decisions about treatment earlier.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

5PSQ-036 IMPROVEMENT IN POSTOPERATIVE PAIN CONTROL BY THE INTRODUCTION OF ELASTOMERIC LOCAL ANAESTHESIC LEVOBUPIVACAINE PUMPS IN PATIENTS UNDERGOING ARTHROPLASTY

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Background and importance In order to improve pain control in patients undergoing arthroplasty, in March 2021 the Pain Management Unit introduced a new protocol that included the use of elastomeric levobupivacaine pumps administred in the adductor canal.

Aim and objectives To evaluate the reduction of postoperative pain and the need for rescue analgesia after the introduction of elastomeric levobupivacaine pumps.

Material and methods Study design: retrospective and quasi-experimental in a 254-bed regional hospital.

Sample: all patients who underwent arthroplasty. Two study groups were established: PRE group (August 2020–February 2021) and POST group (March–September 2021).