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P0124 Evaluation of potential drug interactions with two different databases in patients with candidaemia

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Background: Antifungals may lead to significant drug-drug interactions (DDIs) which in turn interfere with patients' outcome. We determined the frequency of potential DDIs and adverse events in candidemia patients per two different drug interaction databases

Materials/methods: E-records of patients diagnosed and treated for candidemia between April 2017 and September 2018 in Hacettepe University were analyzed. Micromedex® (MMX) and Fungal Pharmacology® (FP) online databases were used to identify potential DDIs. Adverse drug reactions were defined utilizing RIFLE and CTCAE (Common Terminology Criteria for Adverse Events) criteria.

Results: One-hundred individual antifungal usage in 72 patients were detected. Non-albicans candida species were yielded in 63.9% of episodes with 55.6% mortality. Caspofungin, fluconazole, anidulafungin, micafungin, LAmpB and voriconazole were used in 30%, 29%, 21%, 9%, 9% and 2% of the episodes, respectively. Patients received median 14 (4-29) medications simultaneously. Median antifungal treatment duration was 14 (1-59) days. MMX database yielded 20 contraindicated, 32 major, 44 moderate DDIs. FP database search yielded 0 avoid-combination, 19 consider-therapy-modification, 66 monitor-therapy and 12 no-action-needed, 4 no-known-interaction type DDIs. There were 125 DDIs determined by any database. Among the DDIs, 24 were detected only by MMX, 29 only by FP and 72 were determined by both databases. Fluconazole, voriconazole, caspofungin and LAmpB were included in 105 (84%), 13 (10.4%), 4 (3.2%) and 3 (2.4%) DDIs, respectively. Voriconazole (100%), fluconazole (96.6%) and LAmpB (22.2%) were the antifungals most frequently associated with DDIs ($p<0.001$). No DDIs were detected with anidulafungin and micafungin. Fifty-one and 5 drugs were not included in FP and MMX databases, respectively. DDI information was not available for 579 drug pairs in FP database. Total 23 adverse reactions were detected during treatment. Adverse drug reactions were encountered in 55.6% of LAmpB treatment episodes. Mortality occurred in 14 (77.7%) and 4 (7.4%) patients with adverse drug reactions and without adverse drug reactions, respectively ($p=0.028$). DDIs as defined by any database were not related to mortality ($p=0.142$).

Conclusions: DDIs are common during candidemia treatment. Different drug interaction databases may yield conflicting results. More than one database should be searched to determine DDIs correctly