prophylaxis using fluconazole 400 mg once daily versus amphotericin B lipid complex 2.5 mg/kg three times per week in adult patients with ALL during the neutropenic nadir who received hyper-CVAD as part of their chemotherapy regimen.

Methods This was a retrospective, cohort chart review study conducted in eligible patients with ALL who received a hyper-CVAD-based chemotherapy regimen between 1 January 2007 and 31 December 2016 at KAMC, Jeddah. We included patients with ALL aged older than 14 years who completed at least one course of hyper-CVAD and received antifungal prophylaxis. We excluded patients who received the BFM regimen. Data were collected using a hospital information system. The primary endpoint was the incidence of fungal infection, which was assessed using microbiology data and imaging studies for radiological evidence of fungal infections. The secondary endpoints were to assess QTc prolongation in Philadelphia-positive ALL that is associated with fluconazole use in combination with tyrosine kinase inhibitor, and lastly the cost impact based on the type of antifungal prophylaxis used.

Results A total of 105 cycles of hyper-CVAD were reviewed. In 70 cycles, fluconazole was used as antifungal prophylaxis ($n=70$) and in 35 cycles amphotericin B lipid complex was used ($n=35$) as antifungal prophylaxis. Microbiologically documented fungal infection was found in two of 70 cycles in the fluconazole group and radiologically documented fungal infection was found in one patient in the fluconazole group. QTc prolongation was observed in 12 cycles. In nine of 12 cycles, events of QTc prolongation were observed during the study, fluconazole was used as antifungal prophylaxis, and patients were on tyrosine kinase inhibitor. In three of 12 cycles, events of QTc prolongation were observed during the study, amphotericin B lipid complex was used as antifungal prophylaxis, and patients were on tyrosine kinase inhibitor.

Conclusion Fluconazole is considered as standard antifungal prophylaxis in patients with ALL with acceptable safety profiles. Fluconazole had comparable efficacy to amphotericin lipid complex. Fluconazole may cause QTc prolongation when used in combination with tyrosine kinase inhibitors and patients need to be monitored more closely when this combination is used in those with Philadelphia-positive ALL.

11 CONSISTENCY OF CT-KUB RADIATION DOSE AND EXPOSURE PARAMETERS IN KING ABDUL-AZIZ MEDICAL CITY IN JEDDAH: QUALITY ASSESSMENT

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Background Computed tomography (CT) is a type of medical imaging that uses x-rays to generate cross-sectional images of the body. Although CT improved the limitations in conventional radiography, the effective dose for CT procedures is higher than the dose of a conventional radiographic examination of the same part. For instance, the radiation dose for kidney, ureter, and bladder (KUB) in conventional radiography is 0.7 mSv, whereas in the CT scan it is 10 mSv. Therefore, patient radiation safety in compliance with American College of Radiology (ACR) standards has to be maintained. In this study, we aimed to evaluate the patient radiation dose delivered in unenhanced CT-KUB examinations using two CT

machines at King Abdulaziz Medical City in Jeddah (KAMC-JD).

Methods This was a retrospective, cross-sectional study of all patients who had unenhanced CT-KUB examinations in KAMC-JD between 1 January and 30 June 2018. Patient characteristics and radiation parameters were obtained from the hospital information system and pictures archiving and communication system, respectively, and compared with the ACR standards.

Results A total of 264 patients were included in the study: 199 (75.5%) examinations were performed with machine 1 and 65 (24.6%) were performed with machine 2. Mean age was 48.1 ± 16.3 years and 66.7% of patients were male. Mean body-mass index (BMI) was 29.59 ± 6.45 kg/m². The mean volume CT dose index (CTDIvol), dose-length product (DLP), time(s), pitch, and effective dose were significantly different in the CT machines with p values between 0.004 and <0.001 . No significant differences were found in kVp, slice number, slice thickness, length of cover, and effective dose with use of different types of CT. Both CT machines were within the ACR standard range of 10mSv. There was a positive strong correlation between BMI (29.6 kg/m²) and the effective dose ($p<0.001$).

Conclusion The radiation doses delivered by the two CT scanners in KAMC-JD are compliant with ACR standards. Periodic assessment is recommended every 2 years.

12 OUTPATIENT FOLLOW-UP IS ASSOCIATED WITH REDUCED EMERGENCY DEPARTMENT VISITS IN PATIENTS WITH SICKLE CELL DISEASE: A RETROSPECTIVE COHORT STUDY FROM RIYADH, SAUDI ARABIA

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Background Pain is the main source of distress in patients with sickle cell disease (SCD). Unmanageable pain, often termed 'crises', may prompt unexpected visits to the emergency department (ED) or other acute healthcare facilities. One study from the Eastern Province in Saudi Arabia reported that 64% of patients with SCD present to the ED more than three times over a 6-month period. Outpatient follow-up may have a role in preventing ED visits, but this has not been fully explored in Saudi Arabia. This study aimed to assess the relation between outpatient follow-up and future ED visits due to painful crises in patients with SCD.

Methods This retrospective, observational study utilized data from the electronic medical record system at King Abdulaziz Medical City, National Guard Health Affairs in Riyadh. The study included adult patients with SCD who presented at least once to the ED due to a painful crisis between January 2016 and December 2017. The time between ED visits due to painful crises was set as the outcome variable. Cox regression analysis with random effects model (frailty model) was used to determine the effect of outpatient follow-up at 15 days, 30 days, and 90 days on the time to next ED visit. Baseline characteristics and previous history of sickle cell complication were included in the model as confounders.

Results Eighty patients with SCD presented a total of 463 times to the ED due to painful crises. 54% of these visits