Material and methods Antifungal ear drops are not commercially available. The otolaryngology service requested a broad spectrum topical antifungal for recurrent otomycosis. After a literature review, a sterile aqueous formulation of voriconazole 10 mg/mL was considered, ensuring the absence of ototoxic effects, with an optimal pH of 6.3 that allowed contact with the external channel. We assigned a beyond use date of 14 days refrigerated, 45 days frozen and protected from light.

Baseline data were collected from the clinical history. Patients reported their outcomes in interviews with the pharmacists; humidity, otorrhea, earache, itching, loss of hearing before/after treatment and possible adverse events (AE) were recorded. Patients were informed and consent was requested for participation. Statistical analysis was made with SPSS and STATA. The results were analysed using the McNemar test of paired data.

Results Following the macroscopic finding of hyphae, microbiological culture was requested in 55.5% of cases, and Candida (33%) and Aspergillus (22%) isolates were found. All patients were treated previously with topical drugs (94.4% antibiotics, 55.5% antifungals) and 83.3% also with oral agents (83.3% antibiotics, 22.2% antifungals), without improvement. Eighteen patients (58.8% women, median age 67 years (range 44.5–75)), were treated with VE for an average of 4 weeks (SD 1.8), administering 1–2 drops 2–3 times a day.

Interviews were conducted in 14 patients: 93.3% reported a general improvement in symptoms and 86.7% associated it with VE. Patients experienced a significant improvement in humidity (pre 88.2%, post 13.3%, p<0.05), otorrhea (pre 100%, post 6.7%, p<0.05), earache (pre 41.2%, post 0%, p<0.05) and itching (pre 41.2%, post 6.7%, p<0.05), and 36.4% perceived an improvement in hearing loss (p>0.05). Only one AE (mild tingling) was recorded.

Conclusion and relevance Our observations showed that voriconazole ear drops were an effective and safe option that significantly reduced symptoms in patients with recurrent otomycosis which failed to respond to other therapeutic alternatives. Further prospective studies are needed to confirm these findings.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

Material and methods Using the statistical software ‘APOTECAM®A’, which allows regular checking of the performance of the robot, the pharmacy production of 20 anticancer active ingredients was monitored from January to October 2018, focusing on the dosage accuracy (%) of the preparations automatically compounded and the robot error rate.

The results of the analysis will define the performance of the automation in terms of preparation quality and safety, and production efficiency in the daily routine of the pharmacy.

Results During the study period, 8478 automated preparations were compounded with APOTECAM®A by the pharmacy. The error rate of the robot was −1% of the total automated production. Regarding the accuracy of the successful preparations compounded by APOTECAM®A, 97.5% of the preparations had a dosage accuracy between 0 and ±3%. The remaining 2.5% of the preparations produced with the robotic system were within the ±5% tolerance limits defined by the pharmacy as acceptable.

Conclusion and relevance The analysis carried out by APOTECAM®A showed high dosage accuracy in combination with a low percentage of errors in the automated production. The data show high quality as well as high reproducibility of safe production using APOTECAM®A.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

Aim and objectives The study aimed to verify the production accuracy of APOTECAM® as well as the error rate of the robot during compounding.

Material and methods The study was performed by Nextar Labs (Nes Ziona, Israel). Vial adaptors (VA) were applied on drug vials (cyclophosphamide, 5-flouracil (5-FU)). Extreme conditions were used to generate vapours—heating to 50°C and having a nitrogen gas flow (250 mL/min) into the vial for 5 hours via the VA fluid pathway. A closed test chamber was employed for capturing drug vapours. Vapours released through the air filter were trapped, recovered and quantified using validated LC/MS/MS methods. As a positive control,
parallel testing was performed using Chemfort VA from which the filter system had been removed.  

**Results**  
No drug was found in any of the test samples with the intact air filter system in Chemfort VAs, either fresh, following aging for 3 years or after 7 days of exposure to drug vapours. Recovered vapour was consistently found in the positive control samples which had Chemfor VAs without a filter system. Mean±SD (n=5) levels were 69±34 and 35±20 ng for cyclophosphamide and 5-FU, respectively.  

**Conclusion and relevance**  
The results confirm the efficacy of the Chemfort air filtration system, even after 7 days of exposure to drug vapour or a shelf life of 3 years.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**  
Conflict of interest  
Corporate sponsored research or other substantive relationships:  
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