the effectiveness and safety of the eye drops in a premature infant.

**Material and methods** Case description: a premature infant (26 weeks’ gestation) was diagnosed with conjunctivitis due to *Stenotrophomonas maltophilia* multi-resistant, sensitive to levofloxacin. The neonatal intensive care unit requested the manufacture of levofloxacin based eye drops.

The pharmacy service initiated a bibliographic search to find the indication, dosage, manufacture and stability of levofloxacin 0.05% based eye drops.

**Results** We decided to prepare it with injectable levofloxacin 500 mg/100 mL, taking into account the physical and chemical characteristics an ophthalmic drug should have:

- non-contraindicated excipients (injectable excipients: water, HCl and NaOH);
- acceptable pH (4.4–5.5) and osmotic concentration (300–310 mOsm/l).

We packaged the parenteral solution in a horizontal laminar flow cabinet, filtering it with a 0.22 μm filter, in a light protected eye drops bottle. We checked whether it was clean and particle free. The validity period was established: 9 days inside a refrigerator, according to the risk matrix for sterile preparations included in the ‘Guía de Buenas Prácticas de Preparación de Medicamentos’.

The patient was started on treatment with levofloxacin 0.05% eye drops with the following dosage regimen: 1 drop every 6 hours. We recommended including the nasolacrimal canal for at least 2 min in order to avoid systemic absorption of the eye drops when administered via the eyes and to decrease any systemic adverse reactions. The patient showed good progress, so we decided to interrupt the treatment after 7 days due to symptomatic improvement with no conjunctivitis secretion. The eye drops were well tolerated.

**Conclusion and relevance** To manufacture eye drops it is necessary to know the physical and chemical characteristics of the active substance (pH, osmotic concentration and excipients), to ensure that it is effective, safe and stable.

The eye drops were effective and well tolerated in this premature infant, which means that it can be considered as a good option for other patients.

**REFERENCES AND/OR ACKNOWLEDGEMENTS**

No conflict of interest.

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**3PC-008**

**INTERRATVENOUS PERFUSION OF CEFTOLOZANE–TAZOBACTAM USING ELASTOMERIC INFUSION PUMPS**

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**3PC-009**

**TREATMENT OF RECURRENT OTOMYCOSIS WITH LOCAL APPLICATION OF A COMPOUNDED FORMULATION OF VORICONAZOLE EAR DROPS: CASE SERIES**

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(VE) for the treatment of otomycosis and analyse its effectiveness and safety.

**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, otorrhoea, 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), otorrhoea (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.

**3PC-011 CLOSED SYSTEM TRANSFER DEVICE BASED ON AIR FILTRATION: THE DRUG VAPOUR CHALLENGE**

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**Background and importance** Chemotherapy drugs were shown to form hazardous vapours that pose a health risk to pharmacists and nurses. One of the aims of using a closed system transfer device (CSTD) is to prevent this harmful exposure. The vapour containment efficiency of air filtration CSTDs is perceived as less obvious compared with that of physical barrier based CSTDs, and therefore should be proven throughout the shelf life of these devices in order to support the claims of its instruction for use (IFU).

**Aim and objectives** The aim of the study was to test the drug vapour containment capacity of Chemfort, a new air filtration CSTD. The objective was to investigate if the air filter remained fully functional at the end of the shelf life (3 years). According to the IFU, the device can be used on a drug vial for a period of 7 days, and thus the study also tested the filter functionality after it was exposed to vapours of a hazardous drug for 7 days.

**Material and methods** The study was performed by Nextar Labs (Nes Ziona, Israel). Vial adaptors (VA) were applied on drug vials (cyclophosphamide, 5-fluouracil (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,