Background and importance The development of skin tests is a booming diagnostic area in detecting the agent responsible for an allergic reaction. 

Aim and objectives To describe the development and results of skin tests in the study of anaphylaxis by Trigon depot.

Material and methods A 52-year-old patient presented with generalized pruritus, local irritation and dyspnoea immediately after infiltration of Trigon depot. The allergology department asked the pharmacy department (PD) to prepare intraepidermal (prick test) and intradermal tests with the concentrated drug and serial dilutions of Trigon depot, triamcinolone, carboxymethylcellulose and polysorbate 80. The PD carried out a bibliographic search to determine the physical form of the components, and their physical–chemical characteristics and conservation. There were no specific data on dilutions to these tests, so we relied on Al-Hadithy et al (2011).

The PD evaluated the effectiveness by the results of the skin tests. Possible false positives were taken into account.

Results We manufactured Trigon depot 40 mg/mL prick tests (from commercialised vial), carboxymethylcellulose 5 mg/mL (from commercialised eye drops), triamcinolone 1 mg/mL (from the substance powder using a 0.22 μm filter) and polysorbate 80 (from docetaxel 20 mg/mL). The intradermal syringes of Trigon and carboxymethylcellulose were prepared at serial dilutions of 1:100 and 1:1000, and triamcinolone and polysorbate 80 at dilutions of 1:1, 1:10 and 1:100.

According to good manufacturing practices, the process was carried out in a horizontal laminar flow hood, except for polysorbate 80. Physical stability was evaluated by visual inspection to ensure homogeneity and it was packed in 1 mL syringes stored at 2–8°C for 48 hours protected from light. The results of the study were: negative skin tests for docetaxel (containing polysorbate 80) and triamcinolone; prick test with Trigon depot produced mild erythema; intradermal reaction with carboxymethyl cellulose (1:100) was positive with an 8 mm papule and erythema; and intradermal reaction with carboxymethyl cellulose (containing polysorbate 80) and triamcinolone; prick test with Trigon depot (1:100) was clearly positive with a 15×10 mm papule and erythema.

Conclusion and relevance In this multidisciplinary study, doctors and pharmacists have worked towards a common goal, the well being of the patient in the diagnosis of a rare anaphylactic reaction. It was concluded that the patient had undergone anaphylaxis due to carboxymethylcellulose contained in Trigon depot. This excipient is very common in the pharmaceutical industry. In fact, our patient had previously been exposed to Aquecel AG (contains carboxymethylcellulose) which acted as the primary sensitiser.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.
face many difficulties in providing age appropriate medicines regarding dose, suitability of the dosage form or excipient content. Compounding is the main solution.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Acknowledgements to all pharmacy staff.
No conflict of interest.

3PC-049 IMIPENEM–CILASTATIN FORTIFIED EYE DROPS FOR THE TREATMENT OF CORNEAL ULCERS CAUSED BY CONTACT LENSES: DEVELOPMENT AND CHARACTERISATION

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Background and importance

Corneal ulcers are a common problem that may appear more frequently in patients with inappropriate use of contact lenses. Unfortunately, it can be difficult to diagnose; its cause can be elusive and the consequences of an error in diagnosis or treatment can be severe.

Aim and objectives

To describe the development of 0.5% imipenem–cilastatin eye drops and to evaluate the effectiveness and safety of this master formula.

Material and methods

In February 2019, a 41-year-old woman presented to the emergency department for severe pain in the right eye. Commercial eye drops (0.3% tobramycin and 0.5% moxifloxacin) were being applied. The ophthalmology department diagnosed an infiltrated corneal ulcer with an epithelial defect. Microbiological culture of the contact lenses was requested and Enterococcus faecalis and Achromobacter xylosoxidans were isolated. The antibiogram revealed sensitivity to β-lactams and resistance to tobramycin and quinolones. The ophthalmologist contacted the pharmacy service to select the most appropriate treatment, deciding on the development of 5% ceftazidime and 0.5% imipenem–cilastatin eye drops (1 drop every 2 hours).

A corneal scraping was also carried out where growth of Fusarium spp was found. Therefore, therapy was completed with 1% voriconazole (1 drop every 2 hours) and 5% natamycin (1 drop every 4 hours).

A bibliographic search was made in PubMed and in the Spanish Society of Hospital Pharmacy, focusing on organoleptic characteristics, stability and pH. Effectiveness and safety were evaluated in the medical history (Selene).

Results

We manufactured 5 mg/mL imipenem–cilastatin eye drops from the vial for intravenous use and water for injection, working in a horizontal laminar flow cabinet and following the standardised work procedure. A 0.22 µm filter was used. We established stability at 2–8°C for 2 days, protected from light. It was verified that a completely transparent liquid solution with pH 7 had been obtained.

Conclusion and relevance

Imipenem–cilastatin 0.5% eye drops proved to be a novel alternative in the treatment of corneal ulcers caused by Enterococcus faecalis and Achromobacter xylosoxidans. It produced a rapid and intense antibiotic effect that resulted in a reduction in eye inflammation. It was also easy to apply, which facilitated therapeutic compliance and contributed to a shorter hospital stay. Its safety and tolerance profiles were adequate.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

3PC-050 IMPORTANCE OF COMPOUNDING IN THE PAEDIATRIC HOSPITAL PHARMACY

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Background and importance

Paediatric pharmacy often faces a lack of commercially available medicines suitable or even licensed for use in children. Children cannot be regarded as small adults or as a homogeneous group in themselves. As a consequence, paediatric medicines should be appropriately designed for the target age group. Compounding is the main solution to this problem, so the compounding area becomes essential in this type of centre. Given the high number of requests for these formulations, including the most commonly used compounded preparations in the pharmacy formulation as standard preparations (SP) is a possible solution.

Aim and objectives

To highlight the importance of compounding for obtaining child friendly dosage forms and formulations in a referral paediatric hospital.

Material and methods

All SP included in the pharmacy formulation were identified and research was conducted to ensure that a suitable or licensed commercial product for paediatric patients was unavailable nationally and internationally. Using our compounding software, we quantified all SP made in 2017 due to the lack of a commercially available product and classified these according to their route of administration.

Results

Our formulary included 99 SP compounded in our pharmacy department (table 1). Oral liquid compounded formulations (52) represented 35% of the total oral liquid drugs available in our formulary (148).

Abstract 3PC-050 Table 1

<table>
<thead>
<tr>
<th>Compounding form</th>
<th>Different active substances formulated</th>
<th>Prepared units per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral liquid</td>
<td>52</td>
<td>8300</td>
</tr>
<tr>
<td>Solid</td>
<td>16</td>
<td>25000</td>
</tr>
<tr>
<td>Parenteral</td>
<td>12</td>
<td>1879</td>
</tr>
<tr>
<td>administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocular topical</td>
<td>5</td>
<td>524</td>
</tr>
<tr>
<td>Topical</td>
<td>13</td>
<td>1535</td>
</tr>
<tr>
<td>Rectal</td>
<td>1</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2 describes the reasons for compounding our 99 SP.

Abstract 3PC-050 Table 2

<table>
<thead>
<tr>
<th>Commercially available with no child friendly formulation</th>
<th>Inappropriate excipient for children</th>
<th>Available for a different treatment indication</th>
<th>For stability/sterility requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>(dosage forms, administration volume, dosage form size)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>