the temperature in the column compartment was 40°C. The column used was the Xterra C18 because methadone pKa is 8.3. Retention time for methadone was 4.5 min and for parabens 1.5 min.

The final methadone determination method was validated for a standard of 10 mg/mL and applied for the determination of methadone with two parabens. The most relevant results were: correlation coefficient $r=0.9957$ for methadone in the range tested (7.5–12.5 mg/mL); instrumental precision 0.33% for standards ($n=10$); intra-assay precision 0.53% ($n=6$) and inter-assay precision 1.95% ($n=12$). The relative standard deviation percentage for accuracy was 1.28%, and the percentage recovery was $101.5 \pm 1.5\%$.

Conclusion and relevance Analytical method development and validation procedures are vital in the discovery and development of drugs and pharmaceuticals to ensure performance of the method. The proposed HPLC conditions to determine methadone were proved to be valid and reproducible for carrying out physicochemical stability studies of different methadone oral solutions.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

3PC-031 CURRENT STATE OF THE ANTI-INFECTIVE OPHTHALMIC COMPOUNDING FORMULATION IN PHARMACY SERVICES: A NATIONAL SURVEY

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Background and importance The ophthalmic formulation has for decades been postulated as the only alternative for the treatment of serious infective ocular diseases, since commercial presentations are not available. For this reason, most of these compounded formulas are made in hospital pharmacy services.

Aim and objectives To summarise the current state and processing variability of anti-infective ophthalmic compounded formulas through survey to pharmacists from different hospitals in the country.

Material and methods A survey was developed with questions related to anti-infective ophthalmic compounding formulations: facilities, stockage, use of freezing/preservatives, packaging, vehicles and validity periods. The questionnaire was developed through Google Forms and sent by email to hospital pharmacists nationwide in September 2019.

Results A total of 163 pharmacists from different hospital pharmacy departments answered the survey. Only 80% has installations that met the requirements of the Good Pharmacy Practice manual: 34% prepared anti-infective formulations on demand, while the rest had a stock. The median of the maximum eye drops/batch was 9.9 (IQR 3–10), and the median of the maximum intravitreal injections/batch was 10 (IQR 2–25). Related to eye drops, 49% used freezing on a regular basis, 26% under exceptional conditions and 25% never; while for intravitreal injections, the values were 47%, 13% and 40%, respectively. Eighty per cent never used ophthalmic preservatives while 20% used them under exceptional conditions. For the packaging of vancomycin eye drops, 82% used plastic, 15% glass and 3% both. As a vehicle for vancomycin eye drops, 36% used 0.9% NaCl, 25% DW 5%, 31% balanced

salt solution, 7% artificial tears and 1% water for injection. Validity period was established according to: 53% bibliography, 40% risk matrix in the Good Pharmacy Practice manual, 6% both and 1% according to reference hospital standardised work procedures.

Conclusion and relevance Great variability was observed regarding the methodology used for the preparation of ophthalmic compounded formulas in hospitals throughout the country, highlighting the differences in the elaboration, packing and conservation of the same anti-infective ophthalmic compounding formulations.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Good Pharmacy Practice: <https://www.msccs.gob.es/profesionales/farmacia/documentacion.htm>

Thanks to the pharmacists who completed the survey.

No conflict of interest.

3PC-032 AUTOLOGOUS TISSUE ADHESIVE IN OPHTHALMOLOGICAL SURGERY

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Background and importance Sutures to replace tissue adhesives have enhanced importance. However, commercialised drugs are allogenic, synthetic and expensive, increasing surgery costs.

Aim and objectives

1. To produce an autologous tissue adhesive (ATA) easily compounded in ophthalmological surgery.
2. To show evidences of the safe and effectiveness of the ATA in preclinical studies.

Material and methods To produce 4 mL of ATA based on a fibrinogen (FC) and thrombin concentrate (TC) (proportion 1:1), 20 mL of donor blood plasma were precipitated with protamine to prepare FC, and then 20 mL of plasma were precipitated with acetic acid to obtain a TC in a buffer (CaCl₂, NaHCO₃, NaCl). Drug was conditioned in two 2 mL syringes for topical ophthalmic administration by mixing with a needle.

The in vitro toxicity of the drug was studied in a human corneal epithelial model (described as QobuR), to evaluate the grade of irritation after 30 min of exposition time.¹

Pterygium surgery was performed in four eyes of white New Zealand rabbits, using ATA to fix a frontal conjunctival autograft (4×5 mm) into the temporal bulbar conjunctive.

The grafted eyes were evaluated in vivo by clinical evaluation for 14–28 days and ex vivo by histology.

Results ATA produced from each donor showed a mean of 18.0 g/L of fibrinogen and 1500 UI/mL of thrombin. ATA instantly produced homogeneous clots when it was mixed with a needle.

Three in vitro studies of four ATA showed non-irritation due to high survival cell viabilities (>80%).

Good preclinical results were found:

- 20 mm² autograft could be fixed successfully.