The dose of oxybutynin was maintained in one patient with the initial dose and, in another, rose to 0.1 mg/kg/8 hour (the maximum 0.2 mg/kg/8 hour).

Pharmaceutical care was performed by the explanation of the doses in milliliters adjusted to the weight and monitoring of possible adverse effects. Strawberry essence was incorporated into the suspension to improve flavour.

Since birth, the number of catheters has decreased, with an improvement in the patient's symptoms. Regarding safety, no adverse reactions attributable to the drugs have been observed. **Conclusion** Both oral suspensions were appropriated for the pathology of our patients, which continue in treatment. They are well tolerated, for an age range not included in the bibliography, with good response. Pharmaceutical care was given from the beginning to the family and the paediatric service.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

3PC-060

HOT-MELT RAM EXTRUSION 3D PRINTING: A SMART METHOD FOR COMPOUNDING ORODISPERSIBLE FILMS IN HOSPITAL PHARMACIES

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Background Orodispersible films (ODF) have been proposed as a valid alternative to conventional oral dosage forms to personalise the therapies and to improve patient adherence, especially in special populations (e.g., dysphagics, paediatrics, geriatrics). Since manufacturing technologies used by the industries (e.g., the solvent-casting technique) cannot be easily applied in a pharmacy setting, alternative methods have been proposed for compounding. 3D-printing permits the preparation of ODF of different strengths and geometries that fulfil the Ph.Eur. specifications concerning the uniformity of dosage units.

Purpose To demonstrate the feasibility of the preparation of ODF by hot-melt ram extrusion 3D printing.¹

Material and methods This novel technology consists of three simple operations. First, maltodextrins, drug and other excipients (e.g., colourants, flavours, sweeteners) are mixed in a mortar and wetted with the plasticiser (i.e., glycerine). Then, the mixture is fed into the chamber of the ram-extruder and heated. ODF are individually printed using an 18G needle on the packaging material foil and sealed without further manipulation. The critical formulation attributes and process variables were investigated to define the processability space and their impact on the disintegration time and tensile properties of the ODF. The paracetamol (PAR) was used as a model drug to assess the drug-loading capacity of the ODF and the dissolution profile.

Results Preliminary results allowed to the optimization of the process parameters (heating temperature, 85°C; maximum print rate, 50 mm/s; filling angle, 120°) and composition (maltodextrins/glycerine: 80/20 w/w) to obtain homogeneous ODF. The compounded ODF (6 cm²; thickness 150–250 µm) disintegrated in less than 1 min and showed acceptable tensile properties for product handling. Different doses of PAR (12.5, 25, 37.5% w/w) were loaded to such basic composition

without altering the ODF performances. The CV% of PAR assay remains lower than 5%. The PAR dissolution profile of printed ODF (t₈₀ <6 min) overlapped that obtained by ODF prepared by the solvent-casting technique.¹

Conclusion The overall results suggested that hot-melt ram extrusion 3D printing can be used in a pharmacy setting to prepare well-accepted orodispersible dosage forms and to personalise the drug dose according to the needs of the patient.

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3PC-061

OPTIMISATION OF INTRACAMERAL CEFUROXIME CONSUMPTION IN THE PREVENTION OF POSTOPERATIVE ENDOPHTHALMITIS

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Background The ESCRS study (a study of prophylaxis of endophthalmitis after cataract surgery) demonstrated the effectiveness of cefuroxime (1 mg/0.1 mL) administered in the anterior chamber at the end of cataract surgery for the prevention of the appearance of endophthalmitis. The marketed presentation (Prokram) contains 50 mg per vial in a final volume of 10 mL. The manufacturer recommends the use of one vial per patient (even if it involves discarding 98% of the contents of the vial).

Purpose To describe the optimisation in the use of Prokram (cefuroxime) vials through its redosification in order to obtain prefilled syringes with a concentration of 1 mg/0.1 mL.

Material and methods A bibliographic search was carried out, both for the indications for which the preparation was requested, as well as of its galenic properties, collecting the stability, the conservation and the necessary microbiological controls.

After agreement with the ophthalmology service, it was agreed to prepare pre-filled syringes containing cefuroxime 2 mg/0.2 mL in order to administer 1 mg of cefuroxime. The syringes are made in batches of 20 units and are frozen at –18°C. The units that are ordered according to the daily surgical part are sent to the operating room.

For the elaboration of the cost analysis, the cost of the vial of cefuroxime 50 mg, the insulin syringe of 0.3 mL, the sterile cap, the double bag for the packaging and the cost of the personnel elaborating them, has been quantified.

Results In 2017, 1239 syringes (associated cost of € 847) were prepared. The cost for the hospital of each vial of Prokram is € 7.80, so if they had not been redosed in the pharmacy service the cost would have amounted to € 9664.

No postoperative endophthalmitis has been described.

Conclusion The preparation of pre-filled syringes of cefuroxime 0.2 mg/0.2 mL has produced a cost optimisation of 91%.

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