

ELECTRONIC PRESCRIPTION PROTOCOLS FOR PERSONALIZED STERILE PREPARATIONS FOR THE PEDIATRIC SURGERY DEPARTMENT



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WHAT WAS DONE?

To prepare a protocol with the processes of prescription, validation, preparation and dispensing of personalized sterile formulations in the Pediatric-Surgery-Department (PSD:Otorhinolaryngology, Ophthalmology and Neurosurgery) from Pharmacy-Department (PD).



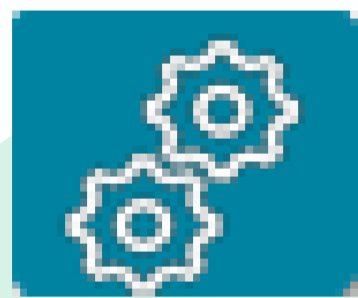
HOW WAS IT DONE?

1. Creation of a multidisciplinary team in which a circuit for the prescription, validation, preparation and dispensing of sterile-preparations was agreed.
2. Analysis with the departments involved of the personalized sterile-medications prepared by PD for use in pediatric-surgical-rooms, and the most frequent doses used.
3. Bibliographic review: Pubmed[®], Cochrane[®], Uptodate[®], Stabilis[®] and other sources such as the Good Clinical Practices (GCP) and the book Preparation of drugs and magistral formulation for ophthalmology (JM Alonso).
4. Creation of electronic-prescription-protocols in ATHOS-Prisma[®], containing:
 - help notes and preconditions for the prescription.
 - information for the administration and management of waste.
 - detailed brew sheet and custom label for the PD.
5. Review of the protocols created and the circuit proposed for the prescription, preparation and dispensing.
6. Start-up of the circuit: review and validation of prescriptions, preparation of sterile-formulations centralized in PD through laminar flow hoods, and dispensing directly to the surgical-room on the scheduled date.



WHY WAS IT DONE?

- ✓ Improve security, planning, and access to information for correct prescription, administration, and management.
- ✓ Guarantee the traceability of all processes.
- ✓ Improve the satisfaction of the services involved, preventing forgetfulness and therefore management of emergencies calls, unjustified need for the prescribed preparations, and incorrect packaging.
- ✓ Improve communication and the work circuit from PD.



WHAT HAS BEEN ACHIEVED?

Piloting began with sterile-otorhinology-formulations in 2021, expanding to ophthalmology and neurosurgery in 2022-2023.

✓ Creation of three groups of protocols that will contain those related to each specialty to facilitate location and prescription by surgeons:

*Pediatric ophthalmology:

Mitomycin 0.2mg/ml intraoperative-solution-trabeculectomy
Fluorouracil 5mg/0.1ml intraoperative-solution-trabeculectomy
Intracameral-cefuroxime 2mg/0.2ml (antibiotic-prophylaxis)

*Pediatric otorhinology:

Cidofovir 5mg/ml intralesional (laryngeal-papillomatosis)
Bevacizumab 2.5mg/ml intralesional (laryngeal-papillomatosis)
Mitomycin 0.5mg/ml (choanal-atresia)

*Pediatric neurosurgery:

Interferon-alpha 3MIU/0.6ml intralesional (craniopharyngioma)

✓ Sixty-two preparations have been prepared and dispensed for a total of thirty children; average age of 4 years (1-10). No adverse-events were reported in any patient after the administration of these sterile-preparations.

✓ A study limitation was sample size. Circuit under development.



WHAT NEXT?

The protocol is applicable to any hospital with electronic-prescription and surgical-area.

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