



PATCH TESTS WITH HAZARDOUS DRUGS: IS IT POSSIBLE TO ENSURE SAFETY DURING PRODUCTION?

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Background and importance

When there is suspicion of an Type IV hypersensitivity allergic reaction to an hazardous drug, the compounding process of epicutaneous patch tests (EPT) used in the diagnosis must be adapted to protect the handler.

Aim and objectives

To describe the design and formulation of EPT with Imatinib and Nilotinib, classified as Hazardous Drugs Group 1 by the National Institute for Occupational Safety and Health.

Materials and methods



A request was made to the Pharmacy Department for an EPT for a patient suspected of IVHAR after treatment with Imatinib in order to confirm the diagnosis and consider switching to Nilotinib.



A literature research was conducted to determine the optimal concentration of both drugs within each EPT, as well as the best vehicle. A galenic control was established to evaluate the extensibility and organoleptic properties of the formula. The stability of the formula was determined in accordance with the risk matrix included in the Good Practices Guide for the preparation of medications in Hospital Pharmacy Services.



The handling of these drugs was always performed in a fume hood with HEPA-H14 filter, wearing a cap, glasses, FFP3 mask, gloves, disposable gown, and shoe covers.

Results

For the preparation of both ointments, the commercial pharmaceutical form was placed in a ZIP-type resealable bag with an ENFit connection. The active ingredients were pulverized using a specific roller-shaped device. Subsequently, liquid vaseline was introduced using an ENFit syringe through the bag's connection. After homogenization, filante vaseline was introduced in the same manner and homogenized again. Finally, it was dosed into individualized 1 mL ENFit syringes.



Imatinib 5% petrolatum (pet.):

- Imatinib tablet 0.4 g
- Liquid pet. 2 g
- Petroleum Jelly q.s. 8 g



Nilotinib 5% pet.:

- Nilotinib capsule 0.2 g
- Liquid pet. 1 g
- Petroleum Jelly q.s. 4 g



Conclusion and relevance

The preparation of EPT with hazardous drugs in the Hospital Pharmacy Department is totally feasible as long as the appropriate procedures and equipment are available.