

PATCH TESTS WITH ETHAMBUTOL 10%, ISONIAZID 15% AND PYRAZINAMIDE 25%: A CASE REPORT

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INTRODUCTION

A 55 year old male patient, developed a DRESS (drug rash with eosinophilia and systemic symptoms) reaction after starting first-line tuberculosis treatment with rifampicine, ethambutol, isoniazid and pyrazinamide. To assess the cause-effect of a suspected drug in a DRESS reaction and later safe reintroduction of therapy, patch tests (PT) are the most useful tool. For this purpose, the Hospital Pharmacy was asked to develop magistral preparations of ethambutol, isoniazid and pyrazinamide.

OBJECTIVE

Development and validation of magistral formulas for topical application to accomplish patch tests of ethambutol 10% (w/w), isoniazid 15% (w/w) and pyrazinamide 25% (w/w).

MATERIALS AND METHODOS

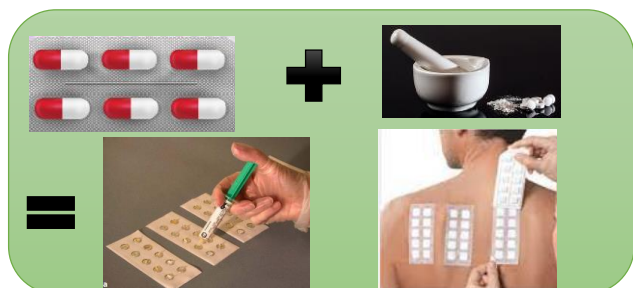
1. Scarce bibliographic information.

Review article published by the French Society of Dermatology¹:



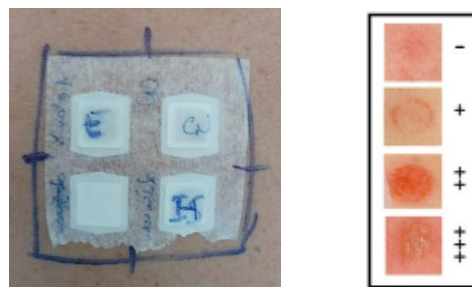
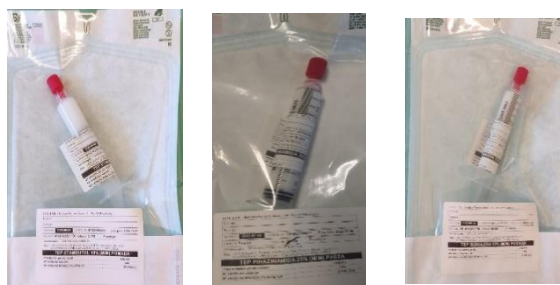
10% (w/w) Etambutol
15% (w/w) Isoniazid
25%(w/w) Pyrazinamide

2. Application of the general rules of Good Handling Practices, according to the Portuguese Galenic Formulary².



RESULTS

The pastes used in the PT were obtained by geometric dilution of pulverized ethambutol 400mg, isoniazid 300mg and pyrazinamide 500mg tablets in white petrolatum.



Quality control tests

- ❖ Color
- ❖ Homogeneity
- ❖ Mass verification



Stability

- ❖ 30 days at room temperature³

CONCLUSION

This task made possible to develop PT for the study of a delayed hypersensitivity reaction to tuberculostatic drugs, that aren't available in the market, allowing a safer reintroduction of tuberculostatic therapy.

Although the PT were negative in this patient, it was possible to develop and validate three compounding formulas with an adequate safety profile and low cost.

BIBLIOGRAPHY

¹ Ingen-Housz-OroS, Assier H, et al. Hypersensibilité retardée aux traitements antituberculeux. Proposition d'une conduite à tenir pratique devant un exanthème : quand arrêter, quelles explorations allergologiques et comment réintroduire le traitement. Annales de Dermatologie et de Vénérologie [Consult. 05.09.22];146(4):313-8 <https://www.sciencedirect.com/science/article/pii/S0151963819300390>

² Portuguese Galenic Formulary 2001

³ United States Pharmacopeia 2020



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