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Background

The hidradenitis suppurativa (HS) is an inflammatory skin disease that cause painful boils and abscess formation, especially localized in intertriginous areas. Resorcinol is phenol derivate, and in topical self-treatment decrease the size and pain of HS lesions. Topical 15% resorcinol is prepared as a pharmaceutical compounding and the current literature has no data on microbiological stability of formulations of topical resorcinol 15%. The European Pharmacopoeia (EP) establish on its chapter 5.1.4 the acceptance criteria for compounding's microbiological quality control. Previous to the microbiological quality assay, the EP also establish the necessity of a suitability test of the method.

Purpose

→ The objectiveof this stud was to develop microbiological growth assa to perform a microbiologica stability test for quality contro of this formulation.

Material and methods

n order to determine the ability of croorganisms to grow in the studied rmulation, several reference strains according the European Pharmacopoeia (chapter 2.6.12 d 2.6.13) were selected: *Pseudomonas ruginosa* (ATCCVR 9027TM), *Candida bicans* (ATCCVR 10231TM), *Aspergillus asiliensis* (ATCCVR 16404TM) and *aphylococcus aureus* (ATCCVR 6538TM).

To performthe growth assay, trypticase soy agar (TSA) were used for *P. aeruginosa* and *S. aureus*, and sabouraud glucose agar (SAB) for *C. albicansand A. brasilensis*

The test was performed by taking a 1:1000dilution of 1g topical resorcinol in a 0,1% Tween80®and phosphate-buffered saline (PBS) solution and adding 100µL of a suspension equivalent at 1x10^3cfu/ml of every ATCC strains, which were inoculated in TSA or SAB. All test was made by duplicate and medium lectures were made in 48h.

Results

The formulation compositionof topical esorcinol 15%tested was:

Resorcinol15g
Purified Water 15g
Sodium metabisulfite 0.1g
Lanette base cream q.s. 100g

The ability of ATCC strains to growth in resorcino formulation was confirmed under the study conditions.There was a mean growth o 17x10^4cfu/mLfor S. aureusand 11x10^4 cfu/mL fo *P. aeruginosa* in TSA. For *A. brasilensis* and *C albicans*, 1x10^4cfu/mL and 2x10^4cfu/mL were detected respectively.

Conclusions

The presented method shows a simplified way to test 15% topical resorcinol microbiological viability for quality control.

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