

IMPLEMENTING A STANDARD OPERATING PROCEDURE OF THIOGUANINE 40 MG/ML COMPOUNDED MEDICINE

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Background

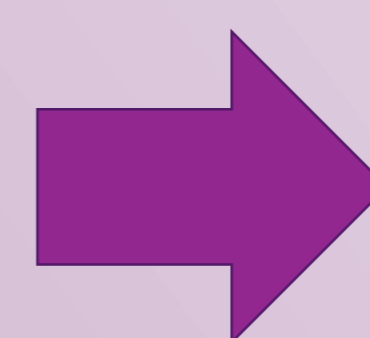
Commercial presentation of oral thioguanine suitable for dosing in pediatric patients diagnosed with acute lymphoblastic leukemia (ALL) is not available in our country. Therefore, the pediatricians in our hospital requested the Pharmacy Department the development of an oral thioguanine compounded medicine.

Objective

To develop a Standard Operating Procedure (SOP) of an oral thioguanine compounded medicine suitable for treating pediatric patients diagnosed with ALL.

Material and methods

Bibliographic review



PubMed, Micromedex Health-Care Trissel's Stability of Compounded Formulations Pediatric Dosage Handbook, Pediatric hospital websites

Results

- Name: Thioguanine 40 mg/mL suspension, 20 mL
- Ingredients: thioguanine (800 mg; thioguanine 40 mg tablets are used), sterile water for irrigation (4 mL), methylcellulose 1% (7 mL), simple syrup (q.s. 20 mL)
- Equipment needed: 5 mL, 10 mL and 20 mL syringes, beaker, stir bar, plugs.
- Packaging: amber glass prescription bottle.
- Modus operandi:



Sterile water for irrigation



Methylcellulose 1%



Simple syrup

Required volume of sterile water, methylcellulose, and simple syrup is loaded into separate syringes and placed inside the cabinet



Dissolve without triturating the tablets: 15-20 min (inside the cabinet)

After that, methylcellulose is added and stirred gently. This suspension is loaded in an empty syringe and brought up to 20 mL with simple syrup. The suspension is transferred to the prescription bottle and then properly shaken.

The final suspension has a light yellow color and pleasant organoleptic characteristics.

- Labeling: 40 mg/mL Thioguanine suspension (20 mL). Administration: oral. Conservation: ambient temperature, protected from light. Shelf-life: 30 days. Shake before use.
- Indication: acute lymphoblastic leukemia

Conclusion

The SOP for the preparation of thioguanine 40 mg/mL oral suspension is simple and the designed compounded medicine has allowed the administration of the required dose, covering the therapeutic needs of pediatric patients diagnosed with ALL.