Hospital Pharmacy 5.0 - the future of patient care
25-27 March 2020
Gothenburg, Sweden
#EAHP2020

eahp european association of hospital pharmacists

TOLERANCE PROFILE TO ANTI-THYMOCYTE IMMUNOGLOBULIN TREATMENT AND ITS RELATION TO INFECTIOUS PARAMETERS IN PAEDIATRIC PATIENTS

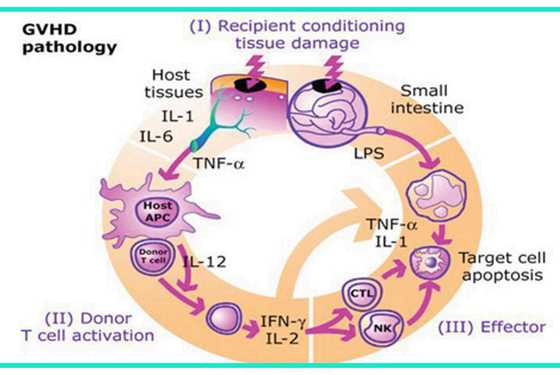
A Ferrada Gascó[1], G Gómez Silva[2], E Martínez Chillaron[3], I Beltrán Garcia[1], P Escobar Cava[1], C Fuentes Socorro[3], JM Fernández Navarro Navarro[3], JL PovedaAndrés[1]

[1]Hospital La Fe, Farmacia, Valencia. [2]Hospital clínico universitario, Oncohematología pediátrica, Santiago de Compostela. [3]Hospital La Fe, unidad de trasplante pediátrico, Valencia. Contact data: Alejandra Ferrada Gascó (ferrada_ale@gva.es)

4CPS-105 ATC code: L03 - Immunomodulating agents

Background and Importance

Rabbit anti-thymocyte immunoglobulin (ATG) is used to prevent or treat graft-versus-host disease (GVHD). There have been few studies on tolerance to administration of ATG in pediatric patients. It is related to immnomodulatory manifestations that cause an inflammatory response capable of triggering clinical and analytic manifestations similar to those of an infection resulting in the administration of antibiotic in most patients.



Aim and Objectives

To describe the tolerance to the administration of ATG in pediatric patients with BMT and to analyze its relationship with clinical and analytic manifestations similar to an infection.

Materials and Methods

Design

- Observational, retrospective study
- Included pediatric patients with BMT
  - Received ATG: December2010-February2019

Variables collected

- Demographic: sex and age
- BMT related: pathology, sources of Hematopoietic Stem Cells (HSC), donor type
- Clinical symptoms:*fever, temperature
  - *secondary to ATG if 0-72h post-infusion
- Treatment: dose, premedication, side effects
- Analytics: maximum procalcitonin (PCT) and C-reactive protein (CRP), liver and kidney function markers
- Blood cultures

Source

Variables obtained from:

- Electronic/paper medical record
- Onco-hematologic electronic prescribing program

Results

56 patients

Demographic	**Sex and age**	55.35% (31) males and median age of 7 years
BMT related	**Underlying diseases**	**Oncological**: mainly acute lymphoblastic leukemia (57.1%;32) **Hematological**: mainly medullary aplasia (33.3%;3)
	HSC	**Source:** Peripheral blood (50%;28) **Donor type**: mismatched unrelated donor (39.28%;22)
Treatment	**Indication**	92.8%(52) received ATG as prophylaxis and 7.2%(4) as refractory treatment of GVHD
	Dose	1.25-2.5 mg/kg mainly 2 mg/kg(85.7%;48) during three days (two if haploidentical BMT)
	Side effects	All patients received premedication, full dose, and no reduction in rate of administration or discontinuation
Clinical symptoms	**Fever**	73.2%(41) patients (38.5ºC±0.5), appeared 11.28hours after the start of the infusion and lasted 1.77±0.84days

82,9%(34) received broad-spectrum antibiotic treatment: mostly cefepime, amikacin, teicoplanin
During 7.61±3.79days with positive blood culture in 7.3%(3)
Markers of infection were altered in most patients with averages of CRP:97.55mg/dL±59.45 and PCT:35,57ng/dL±28,55

Other side effects: hypertransaminasemia(33.92%;19), hyperbilirubinemia(5.36%;3), anaphylaxis(5.36%), capillary permeability syndrome(5.36%), alteration of renal function(1.78%;1) and Rash(1.78%)

Conclusion and Relevance

ATG treatment in pediatric patients is associated with mild side effects. ATG triggered analytical and clinical altered parameters that simulate infection so in its management empirical antibiotherapy is initiated and it could be stopped precociously in toxic fever by ATG.

making the difference in medication

https://www.eahp.eu/25-4CPS-105