

USE OF NON-SPECIFIC IMMUNOGLOBULINS IN BURNED PEDIATRIC PATIENTS: VALIDATION OF THE PROTOCOL OF A TERTIARY HOSPITAL

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Background

Serious burns produce plasma extravasation which develops an important loss of immunoglobulins (Ig). In patients with a burned surface area (BSA) >15% IgG plasmatic levels decrease until 40 hours post-burn.

Purpose

The aim of this study is to evaluate the use of **non-specific Ig** in **burned pediatric patients** based on the current protocol of the hospital.

Material and Methods

RETROSPECTIVE OBSERVATIONAL STUDY

- Population: Pediatric patients with **≥15% BSA**
- Study period: Between **August 2012 and July 2017**.
- Variables registered:
 - Biodemographic data: sex, age and weight
 - BSA
 - Ig administration data: plasmatic levels dose and number of administrations

PROTOCOL: Use of Ig in burned pediatric patients

- Determination of IgG 24-48 hours post-burn
- Infusion of non-specific Ig if patients have below-normal levels
- Dose: 400mg/kg

Reference range of IgG based on age (mg/dL)

0-1 months	250-906
1-3 months	200-580
3-12 months	196-1045
1-5 years	360-1236
5-10 years	608-1574
> 10 years	700-1600

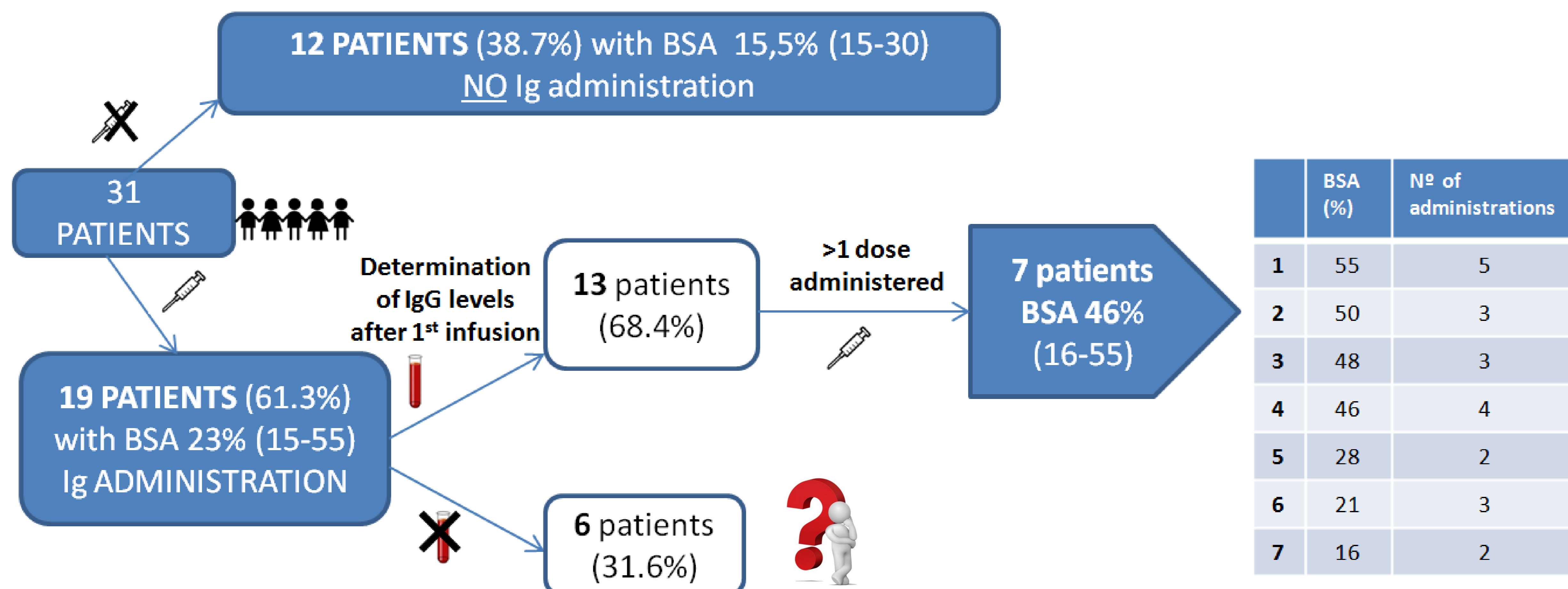
Results

BIODEMOGRAPHIC DATA AND BSA	
Patients	31 (19♂ /12♀)
**Subgroup with BSA≥20%	16
Age (years, median)	2 (8 m -15 y)
Weight (Kg, median)	13 (7.5-67)
BSA (% , median)	20 (15-55%)

Ig ADMINISTRATION DATA		
Determination of IgG levels	26 PATIENTS (83.9%)	Below- normal levels: 18 patients (69.2%) with BSA 23.5% (15-55)
	*Subgroup with BSA≥20% 15 PATIENTS (94%)	Normal levels: 8 patients (30.8%) with BSA 15% (15-21)
Patients and dose administered	19 (61%) and 400mg/kg in all patients enrolled	

PROTOCOL: Use of Ig in burned pediatric patients
 ▪ Determination of IgG 24-48 hours post-burn
 ▪ Infusion of non-specific Ig if patients have below-normal levels
 ▪ Dose: 400mg/kg

18 patients (58%) accomplished the recommendations of the protocol. ✓



Conclusion

58% of the patients complied **all the recommendations** specified in the protocol



In patients with **BSA≥20%**, **determination** of plasmatic levels is essential: it was detected that **more than 90%** of the patients had **below-normal levels** of IgG



Proposal to improve the protocol: To **repeat IgG determination** in all the patients who have received an infusion to corroborate the **achievement** of normal IgG levels.