

PARENTERAL NUTRITION-ASSOCIATED CHOLESTASIS

Hernández-Sánchez A, Gil-Martín A, Tejada-González P, Molina-García T.
Hospital Universitario de Getafe. Madrid. Spain.

BACKGROUND

PARENTERAL NUTRITION-ASSOCIATED CHOLESTASIS (PNAC) results in **SIGNIFICANT MORBI-MORTALITY**. Progression to **END-STAGE LIVER DISEASE** and subsequent **HEPATIC FAILURE** is the most feared complication.

OBJECTIVE

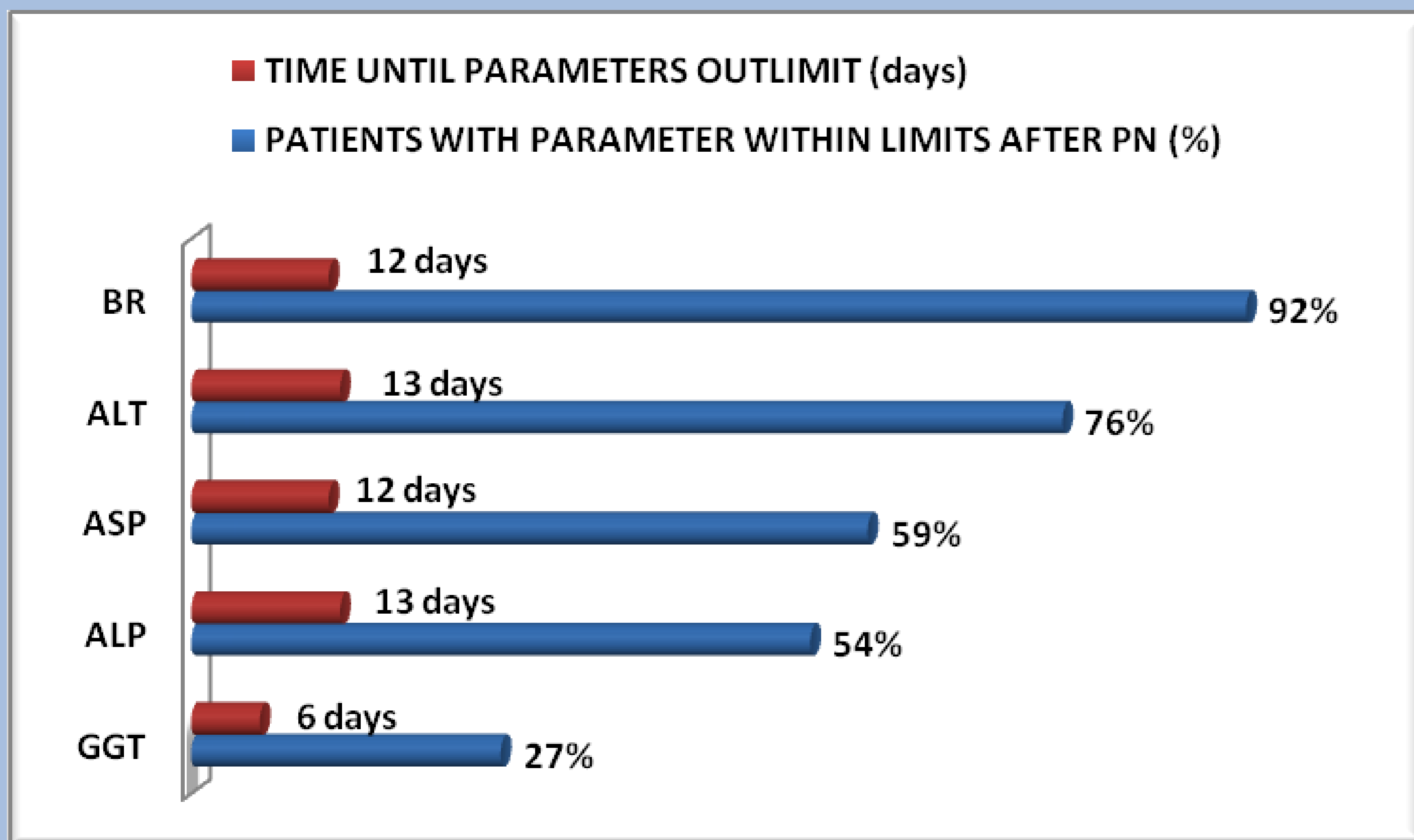
To **INVESTIGATE** the **ALTERATION** of **LIVER BLOOD TESTS** and the **PARENTERAL NUTRITION (PN) CHARACTERISTICS** that trigger PNAC.

METHODS

- ▶ **CLINICAL BLOOD TESTS** and **PN DATA** from January to August 2012.
- ▶ **SURVIVAL STUDIES** for **LIVER PARAMETERS**.
- ▶ PASW Statistics 19.0 & Microsoft Office 2007.

RESULTS

- ▶ **1810 PARENTERAL NUTRITION MIXTURES**.
- ▶ **124 PATIENTS** (55% MEN).
- ▶ **61 YEAR-OLD MEAN** [18-95].



Parameter: [upper limit female, male]: aspartate transaminase(ASP):[32,40IU/L]; Alanine transaminase(ALT):[78,78IU/L]; gamma-glutamyl transferase(GGT):[55,85IU/L]; alkaline fosfatase(ALP):[136,129IU/L]; bilirubin(BR):[1,1mg/dl].

Protective factor		Risk factor
Each gram of fat in PN reduce s3,6% risk of hyper gamma-glutamyl transferasemia	PN fat content	BR
	Age	Each 0,1mg/dl before PN multiply 14,5 times the risk of hyperbilirubinemia
	Gender	
	Liver enzymes before PN	
	PN characteristics	
	Volume	
	Rythm infusion	
Calories		
N content		
Carbohydrates		

CONCLUSIONS

- ▶ **PARENTERAL NUTRITION** posed a **RISK FACTOR** for **PNAC**, being **GGT** the **MOST AFFECTED**.
- ▶ However, **ONLY BILURRUBIN LEVELS PREVIOUS TO PN**, **ACCOUNTED SIGNIFICANTLY** to the **LIVER DAMAGE**. The final impairment is thought to be caused by a **CONGLOMERATE** of **PN AND PATIENT CHARACTERISTICS**, and probably the **LACK OF ENTERAL NUTRITION**.
- ▶ This renders a **DIFFICULT APPROACH** when **PRESCRIBING** and encourages a **RESPONSIBLE APPLICATION** of the **INDICATIONS** of **PN** and **RETURN** to **ENTERAL FEEDING WHENEVER POSSIBLE**.