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# EFFECT OF LIPIDIC COMPOSITION OF PARENTERAL NUTRITION ON THE DEVELOPMENT OF HYPERTRIGLYCERIDAEMIA AND CHOLESTASIS

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## Background and Importance

The lipid type of parenteral nutrition (PN) may influence the development of cholestasis and hypertriglyceridaemia.

PN available at our centre:
- Custom PN (CPN) contains medium chain triglycerides (MCT) and fish oil, rich in omega-3
- Three chamber bag PN (3CB) lacks these lipids

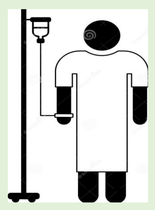
## Aim and Objectives

To compare the relationship between the different lipidic compositions of CPN and 3CB and the outcome of hypertriglyceridaemia and cholestasis.

## Materials and Methods

Observational
Longitudinal
Retrospective
Descriptive

**Inclusion criteria**
- ✓ Hospitalized non-critical, 18-80 years old, without liver diseases.
- ✓ Baseline TG< 200mg/Dl, GGT and ALP< three times their upper limit of normal values.
- ✓ They received PN: with ≥40 grams of lipids/day, >5 days.

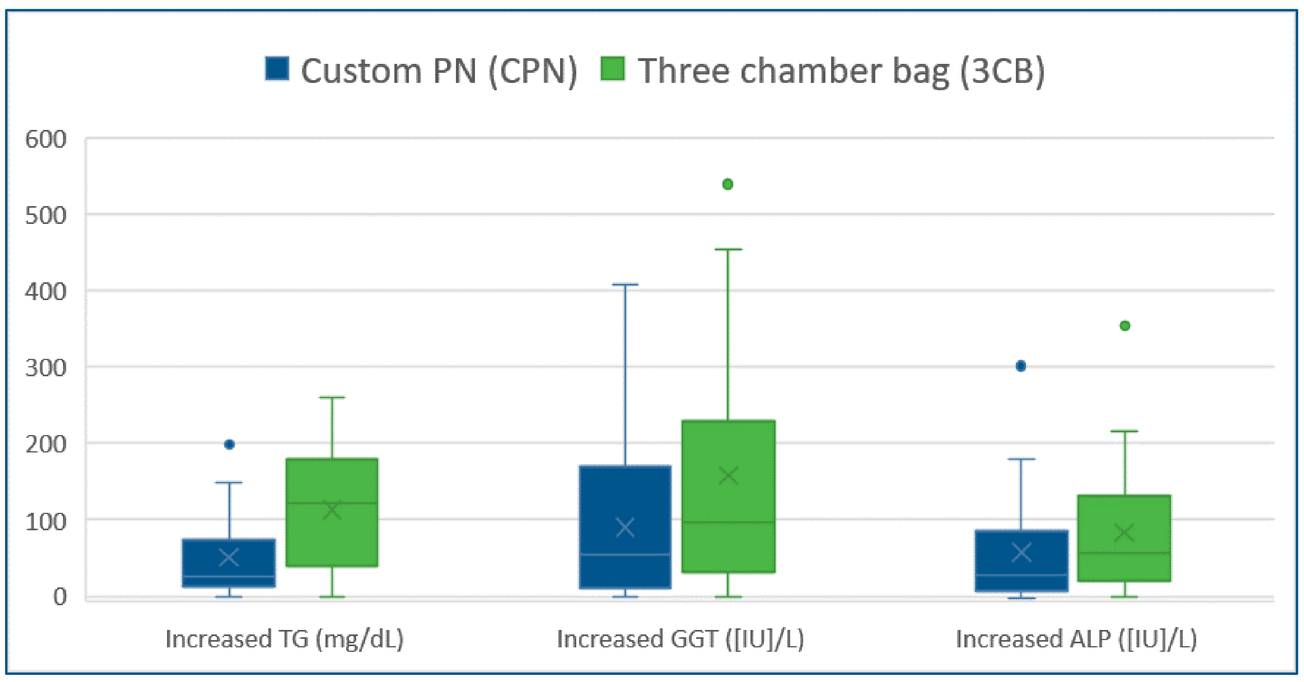


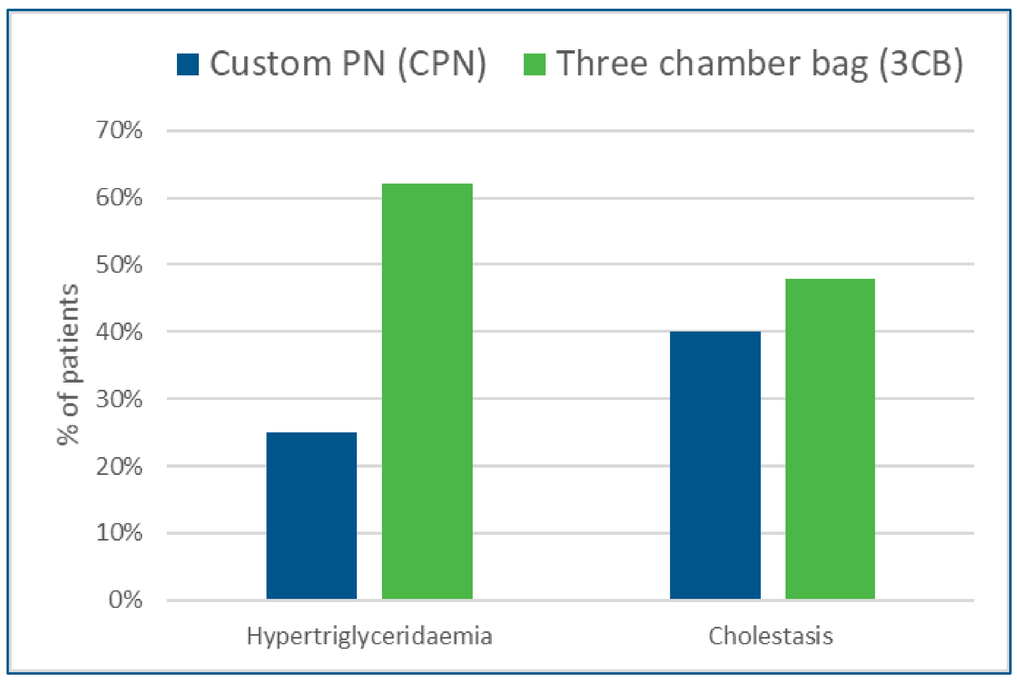
**Data recorded**
- ✓ TG, GGT and ALP were recorded for patients receiving either CPN or 3BC.
- ✓ The increase in these values was evaluated during the administration of PN.
- ✓ Cholestasis (GGT and/or ALP >3 times the limit of normal) and hypertriglyceridaemia (TG >200mg/dL).

**Statistical analysis**
- ✓ Quantitative → Student's t-test (p-value<0.05)
- ✓ Qualitative → Chi-squared test

## Results

N: 41 patients (20 with CPN and 21 with 3CB) → PN during 10 days on average




## Conclusion and Relevance

The absence of fish oil and MCT in the lipid composition of 3CBs is associated with an increase in TG values. Although GGT and ALP levels are seen to rise as well, further studies are needed in order to prove this correlation.

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