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CORRELATION BETWEEN HYPERIMMUNE ANTI-HEPATITIS B IMMUNOGLOBULIN LEVELS AND CLINICAL PARAMETERS IN LIVER TRANSPLANT RECIPIENTS WITH HBV INFECTION

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BACKGROUND AND IMPORTANCE

Routine vaccination has reduced hepatitis B virus (HBV) incidence. However, the detection of cases, mostly imported, highlights the ongoing need for effective, safe, and up-to-date HBV treatments.

AIM AND OBJECTIVE

Evaluation of anti-hepatitis B immunoglobulin (HBIg) serum concentrations, in HBV-infected liver transplant patients, during induction and maintenance treatment after transplantation, and analysis of clinical and analytical factors that may influence their consistency.

MATERIALS AND METHODS

Ambispective, observational study from April 2018 to February 2024

Liver transplant adult patients because of HBV-infection on HBIg treatment.

Variables: anthropometric, clinical, pharmacological (concomitant oral antivirals and immunosuppressive treatment).

Dosage:

- In induction: 4000UI on day 1, 2000UI from day 2-7
- In maintenance: 1000-2000UI/month

Therapeutic target range of HBIg concentrations:

- In induction 100-150UI/L(HBV DNA-) or >500UI/L(HBV DNA+*)
- In maintenance: >100 IU/L.

**HBV DNA+: active HBV replication.*

Dosage HBIg (mean, range)	
Induction	Maintenance
243,3 UI/kg/mes	17,3 UI/kg/mes
276,9-197,8	27,8-11,0

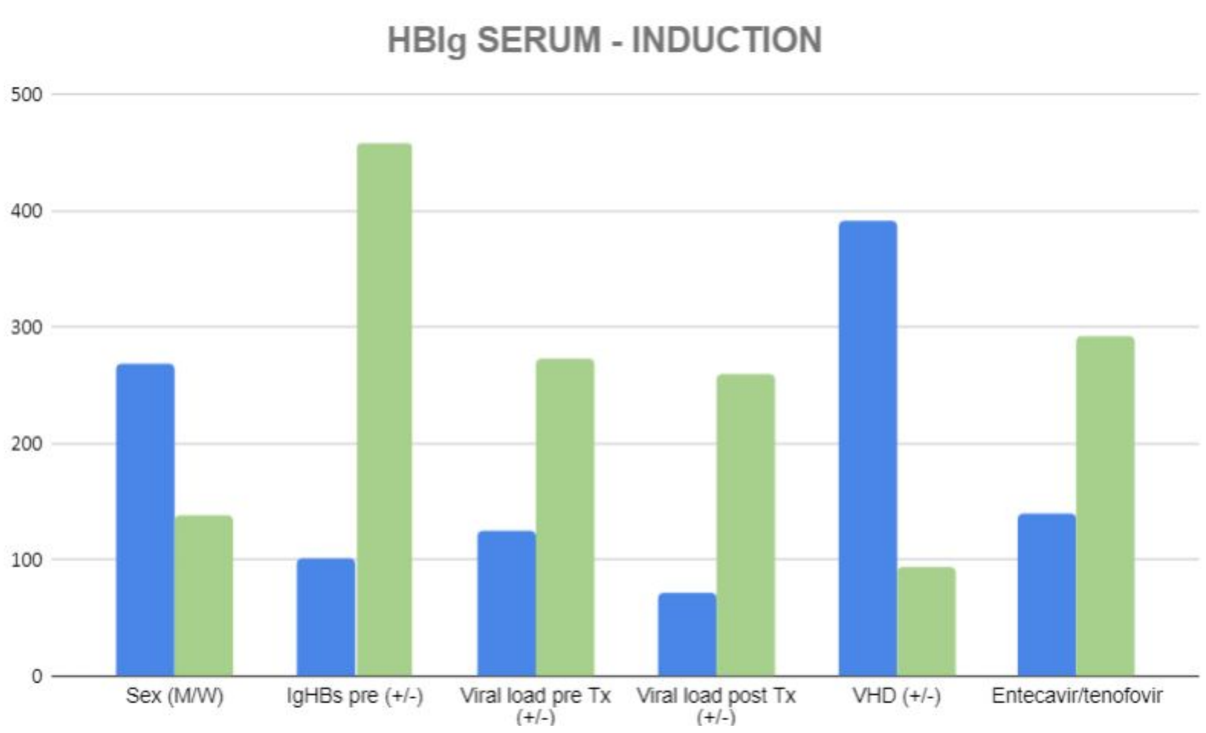
HBIg pre-dose (mean, SD)	
Induction	Maintenance
234,2UI/L	326,7UI/L
328,9	261,5

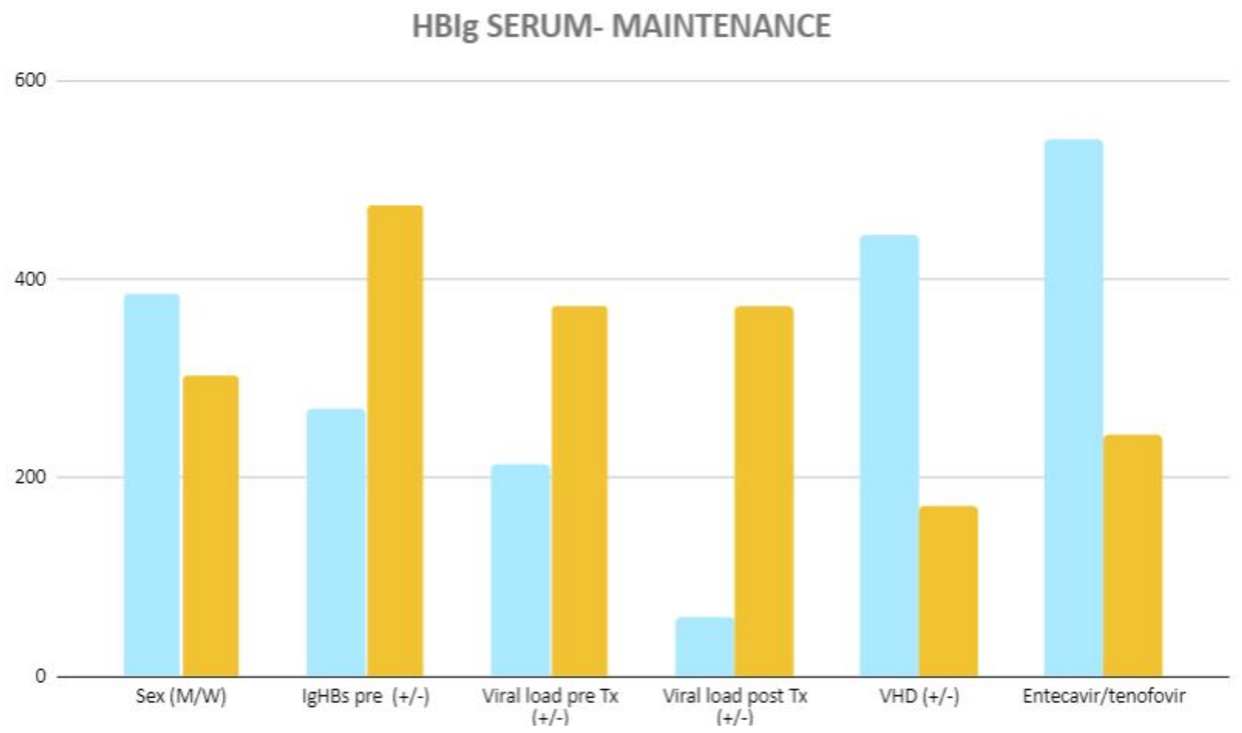
RESULTS

Thirty patients were included:

- 23 (76.7%) men
- **Age, mean (SD)**: 51.8 (12.6) years
- **Weight, mean (SD):** 76.4 (11.4) kg

Serum HBIg values at **induction** and HBIg dose **are not significantly associated** (P=0.434), although they **are associated** at **maintenance** (P= 0.007 and 74.4% of the variability explained).





CONCLUSION AND RELEVANCE

- Serum HBIg concentrations and recovery showed significant inter-individual variability, making regular monitoring essential.
- Low HBIg concentrations during induction suggest the need for higher doses to reach the therapeutic range and ensure immunization against HBV.

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