AUXILIARY LIVER TRANSPLANT IN A PEDIATRIC PATIENT FOR ACUTE LIVER FAILURE SECONDARY TO TUBERCULOSIS TREATMENT

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Introduction

The potential risk of hepatotoxicity of Isoniazid (INH), Rifampicin (RMP) and Pyrazinamide (PZA) in the first-line treatment of tuberculosis has been described extensively. Despite of this, fulminant liver failure (FLF) due to toxic causes is an exceptional entity in paediatrics, with a rapidly progressive course and poor prognosis. The only therapy in most cases is transplantation, a treatment considered to be the gold standard, increasing survival to more than 60% in one year. We present a case of FHF due to antituberculous treatment in a 12-year-old boy, who required auxiliary orthotopic liver transplant (AOLT).

Case description

A 12-year-old male from Bolivia, with no relevant past medical history, presented with a 2 weeks of productive morning cough associated with fever, night sweats and poor general condition. Chest x-rays showed a cavitated multilobar pneumonia, suggestive of tuberculosis. After initiating antituberculous treatment, he presented FLF with coagulopathy and severe encephalopathy. An organ for transplant was urgently requested

Surgical technique

- A whole or reduced organ was used, by implanting left liver, eliminating segments II. III and IV.
- The graft was implanted in the right upper quadrant, with the hilum located medially and the posterior vena cava.
- The inferior vena cava of the donor was attached end-to-side with the receptor's cava, in the highest possible situation.

Anesthetic management

- Balanced General anesthesia. Intubated previously in the ICU.
- Invasive monitorization (including Swan Ganz catheter)
- Politransfusion + Prothrombin complex concentrate 3000ui.
- ATB prophylaxis : Vancomicine + Metronidazole + Anidulafungin
- Inotropes: Dobutamine.

Evolution

After surgery, the child presented progressive improvement of general condition despite neurological sequelae with 6° pair palsy and right hemiparesis that resolved.

- Liver function tests showed decreased ALT/AST and bilirubin, associated with increased hepatic synthesis (graphs).
- Liver biopsy 15 days post-transplant, reports viability of native liver without signs of regeneration and acute rejection of the donor organ, which was treated with corticosteroids.

Conclusions

AOLT is a safe therapeutic alternative in paediatric patients with active tuberculosis and FLF secondary to antituberculous treatment. The start of Immunosuppression and the reintroduction of tuberculostatic drugs are a challenge to avoid new complications.

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