

Therapeutic Plasma Exchange (TPE), Intravenous IG G, Intravenous Rituximab, as a successfully alternative in treatment of acute humoral renal graft rejection



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Introduction

Acute humoral renal graft rejection is still a challenge problem. Treatment includes steroid bolus, monoclonal antibodies, plasmapheresis and, recently, therapeutic plasma exchange (TPE) which has shown good results. The aim of this report is to show our results with TPE.

Results

From 2015 to 2018, we had 5 patients with an acute humoral renal graft rejection (Table 1), they all got the requirements for AHRGR (abrupt increase of creatinine, anuria, graft pain, haematuria and ultrasound showing rejection). Four of them showed on biopsy CD4 + and tubulointerstitial damage, one patient didn't have biopsy due to age and high risk. Five patients initially got three Intravenous bolus of methylprednisolone. The first two patients did not show results, we decided switch them to a different treatment based on recent reports, using our Prismaflex plus Gambro with TPE 2000 set, one exchange every other day, alternating conventional hemodialysis.

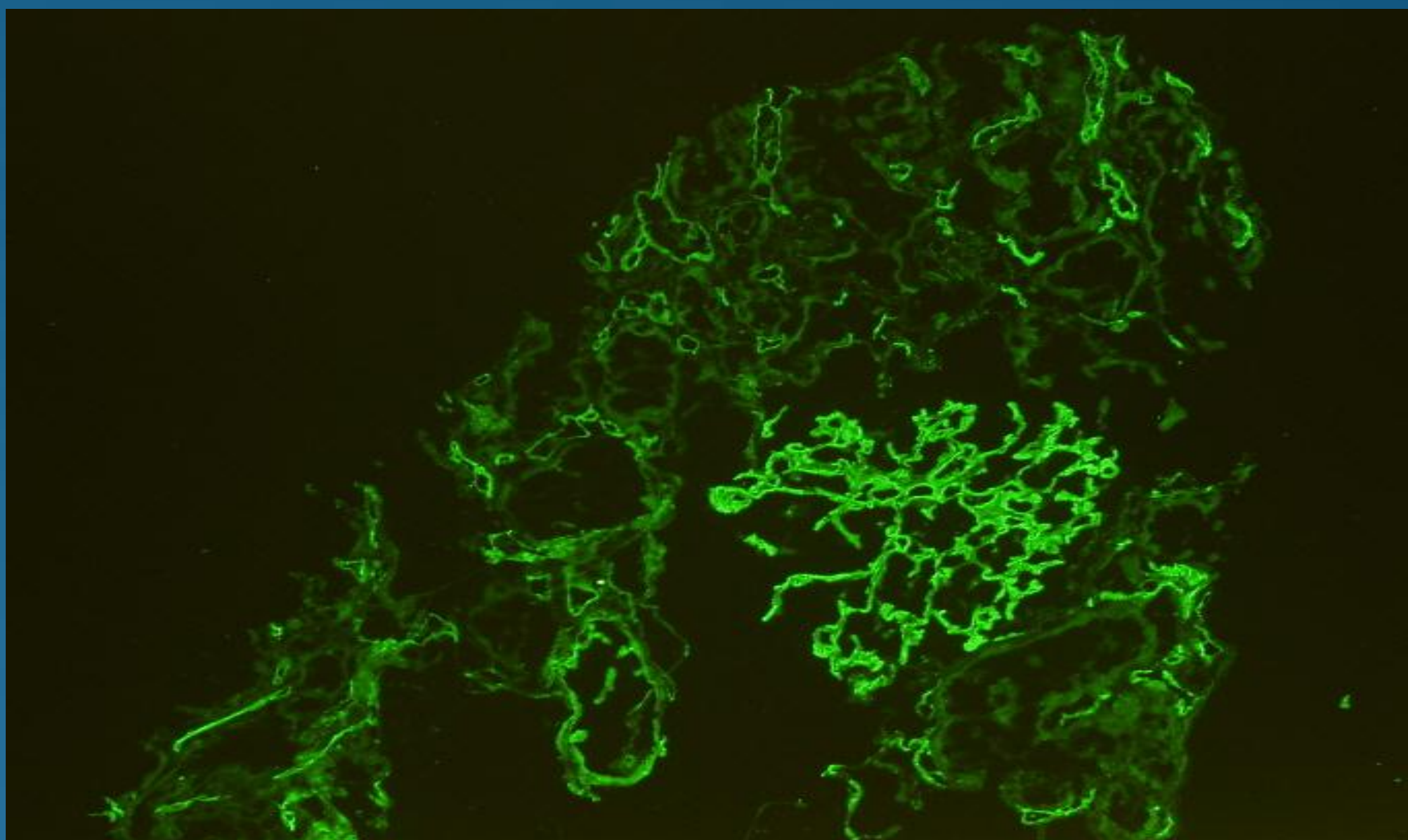


Figure 1: Immunofluorescence with C4d+

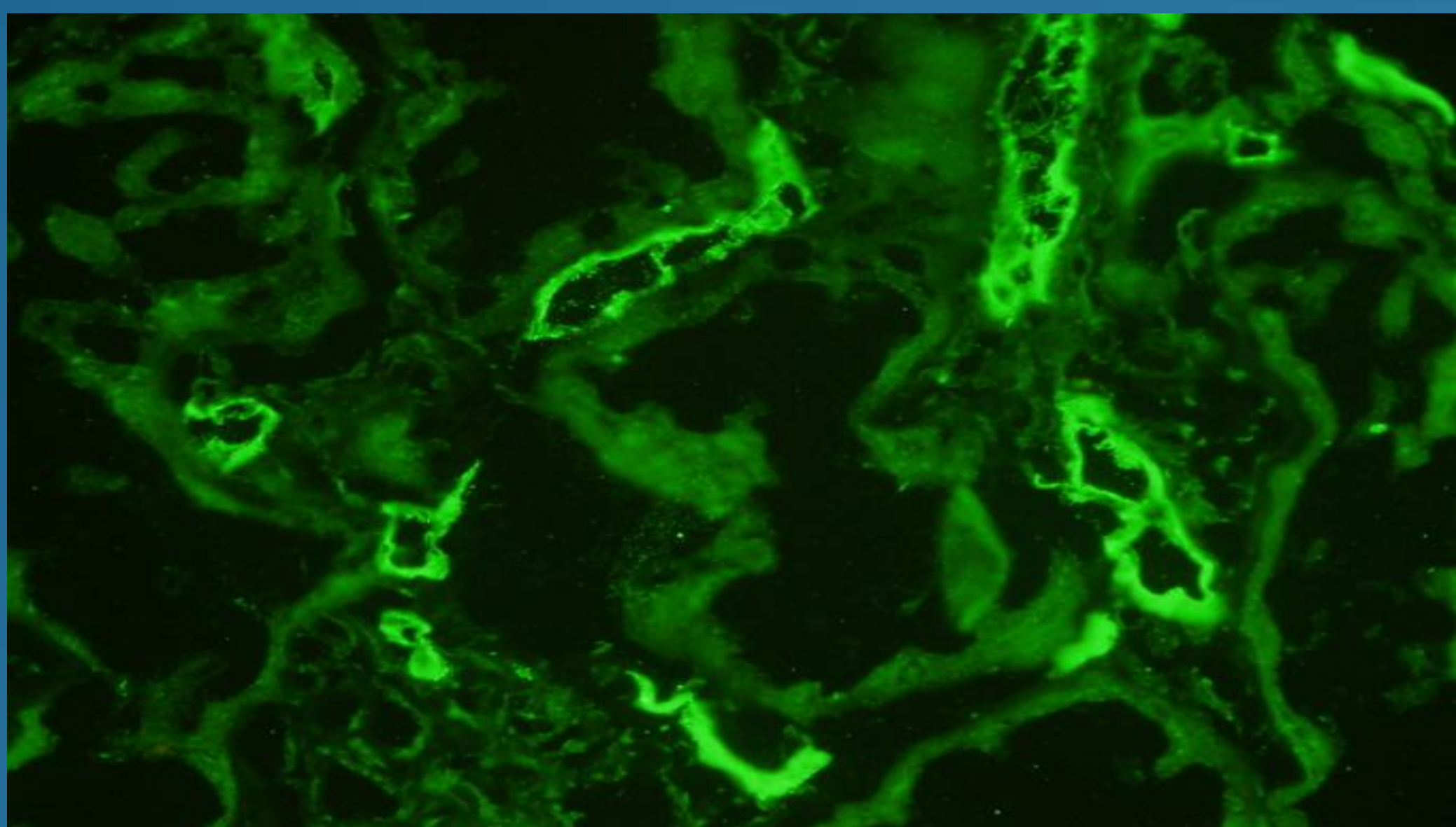


Figure 2: Peritubular capillaries with C4d+

Scheme

THERAPEUTIC PLASMA EXCHANGE every other day with one volume exchange
IMMUNOGLOBULINE G 500-750 mg/kg in a slow infusion immediately after TPE
RITUXIMAB intravenous 375 mg/m2 of BSA once a week for two consecutive weeks.

Table 1.- Patient 's characteristics

Age	Sex	Pretransplant diagnosis	Cross Matching	Donor	Biopsy	Treatment
26	M	Tubulo Interstitial Necrosis	Neg	LRD	C4d+	TPE+ Thymoglobulin
41	M	Type II Diabetes	Neg	LRD	C4d+	Only TPE
50	F	Primary Glomerulopathy	Neg	CadD	C4d+	TPE+IV IG+ Rituximab
57	M	Type II Diabetes	Neg	LNRD	No	TPE+IV IG+ Rituximab
47	M	Membranous Nephropathy	Neg	LNRD	C4d+	TPE+IV IG+ Rituximab

LRD (Living Related Donor), CadD (Cadaveric Donor), LNRD (Living Not Related Donor)

Conclusions

Steroids are not always useful, we do not recommend it. We recommend early biopsy, and early start with an aggressive treatment with PTE based on experience from the Children's Hospital of Mexico "Federico Gomez" where they have shown very good results.