DEGREE OF LIVER INVOLVEMENT IN STABLE KIDNEY TRANSPLANT PATIENTS WITH HEPATITIS C INFECTION: A SINGLE-CENTER EXPERIENCE

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Introduction

Hepatitis C virus (HCV) infection is currently the main cause of hepatotropic viral infection in kidney transplant (KT) recipient throughout the world. So far the lack of therapeutic alternatives to eradicate HCV infection in patients with functioning renal graft and HCV-RNA positive and the risk of complications of liver biopsy (LB) have been a limitation in the evaluation and monitoring of the disease liver in KT population HCV-RNA positive. The FibroScan (FS) is a noninvasive tool to assess liver damage, which can give an approximation of the degree of hepatic fibrosis without exposing patients to the risk of LB, which in recent years has increased its use in hepatology units. The aim of this study was to determine the prevalence and severity of liver disease in a cohort of KT patients with HCV infection.

Methods

It is a transversal study of KT patients with functioning allograft (at list 6 months) at December 2014 (n=1400). One hundred seventy seven patients (12,6%) had serology for HCV (anti HCV positive) and all of them were studied by HCV- RNA (polymerase chain reaction), HCV genotype (GT), and the degree of liver fibrosis by FS in 87 patients (not assessable in 4 patients for obesity). Of the 177 anti HCV positive patients, 16 patients (15.3%) are also carriers of a liver graft (LKT).

Results

Of the 177 anti HCV positive patients, HCV-RNA was positive in 104 patients (58.7%) with a viral load of 4071287 ± 5686001 IU/ml for isolated KT (n=88) and 5800080 ± 11298430 IU/ml for carriers of a liver graft (n=16). The GT1 is the most prevalent (78%), followed by GT4 (12.5%), GT2 (6.2%) and GT3 (3.1%). The prevalence of advanced fibrosis (F4) is 15.7% in isolated KT and 30.7% in the LKT (table 1). Despite having no statistical significance, the factor that was related to a higher degree of fibrosis was the time of renal replacement therapy as well as time evolution of the current KT. The male sex was more prevalent while advanced fibrosis was not related with the age. The GT1 is the most prevalent in all four stages of fibrosis, while viral load tends to be lower at high established fibrosis (table 2).

Table 1

	KT N=70	LKT N=13	Total N=83
F1	43 (61,4%)	6 (46,1%)	49 (59%)
F2	5 (7,1%)	1 (7,6%)	6 (7,2%)
F3	11 (15,7%)	2 (15,3%)	12 (14,4%)
F4	11 (15,7%)	4 (30,7%)	15 (18%)

Table 2

	Age (y.o.)	Sex (male/female) (%male)	CKD and KT evolution(months)			Previous KT	HCV-RNA viral load	HCV Genotype			
			CKD-V (months)	Total dyalisis (months)	Current KT (months)			GT1	GT2	GT3	GT4
F1 (n=43)	54,4± 9,8	22/21 51%	313±125	96±85	150±115	18/43 41,8%	5425315 ± 7275347 (n=43)	31 81,5%	3	0	4
F2 (n=5)	59,6±9,5	4/1 80%	345±94	84±84	218±140	2/5 40%	2832080 ± 3782369 (n=5)	4 75%	0	0	1
F3 (n=11)	58±12,4	4/7 36,3%	278±109	104±89	113±105	6/11 54,5%	4198084 ± 4071621 (n=11)	6 60%	2	0	3
F4 (n=11)	57,9±7,8	9/2 81,8%	363±132	107±125	219±155	4/11 36%	1539544 ± 1224833 (n=11)	9 81%	0	2	0
All KT (n=70)	55,9±9,8	39/31 55,7%	323±121	97±82	168±123	30/70 42,8%	4071287 ± 5686001 (n=70)	50 78%	4 6,2%	2 3,1%	8 12,5%

Conclusions

The prevalence of anti-HCV in KT was 12,6%, and 58,7% of them were chronic RNA-HCV positive. Viral load is high in our KT/LKT patients and GT1 is de most frequent in our population. Advanced fibrosis (F4) evaluated by elastography is high in HCV-RNA positive transplanted patients (15,7% for isolated KT and 30.7% for LKT).

Time of renal replacement therapy and the time evolution of KT appear to be the factors that could be associated with a higher degree of hepatic fibrosis, reflecting a longer history of HCV infection.

The degree of hepatic fibrosis in patients with LKT is greater than that observed in the liver of patients with isolated KT, probably by the coexistence of profibrotic factors inherent liver transplantation.

The current availability of the fibroscan offers the majority of KT RNA-HCV positive patients make an assessment of the degree of liver disease in a simple way and without risk to the patient.

The development of new antivirals with direct action means hope to be able to slow liver disease in kidney transplant patients with active HCV infection so far no other therapeutic options. Determine which is the degree of liver disease in these patients is important to prioritize the indication of new antivirals in patients with a functioning renal graft and HCV-RNA positive.

References

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