

EFFECT OF HEPATITIS C SEROPOSITIVITY ON COGNITIVE FUNCTIONS IN PREVALENT HEMODIALYSIS PATIENTS

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OBJECTIVES

There is a high frequency of poor cognitive performance in hemodialysis patients ¹.Cognitive impairment is not a benign comorbid condition in patients with kidney failure; rather ,even mild impairment is associated with a significantly increased risk of mortality, hospitalization and health care resource use.² Hepatitis C virus infection is still common among dialysis patients and mostly are asymptomatic ³.
 Our aim is to study the possible effect of asymptomatic hepatitis C seropositivity (Child grade A) on cognitive functions in prevalent HD patients.

METHODS

22 hepatitis C seropositive (Child A) stable prevalent HD patients (Group A) were randomly selected from Ain Shams University hospital HD unit, were compared to another group of 23 hepatitis C seronegative stable HD patients (Group B). Both groups were similar in age, sex, BMI, and duration of hemodialysis. Diabetics , those with CKD 2ry to systemic or hereditary diseases as well as those on medications that may affect cognitive functions were excluded from the study. A third group (Group C) of 25 apparently healthy persons of similar age , sex and BMI were also randomly selected. Members of the three groups were studied by CBC , routine biochemistry ,fasting lipogram , Intact PTH, Ultrasensitive CRP, URR% (for dialysis patients),as well assessment of mental functions using Mini mental Test ,Trail making test(A&B), Verbal paired association test (1&2), Digital span forward and backward tests , Wechesler adult IQ test and Benton visual retention test.

RESULTS

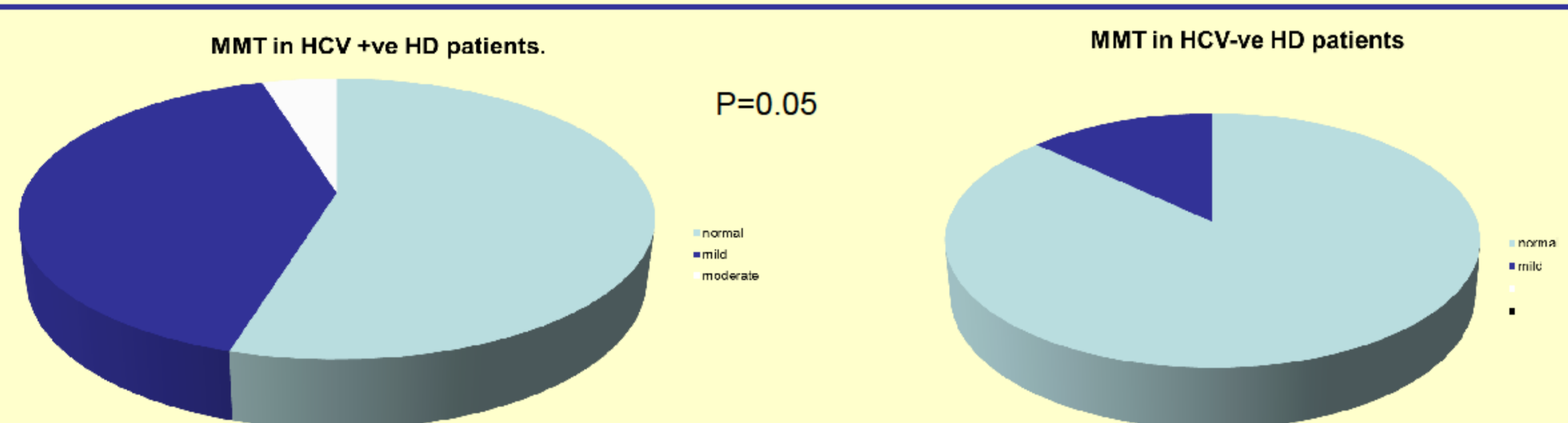
- We did not detect significant relation between any studied cognition test and any of the studied laboratory parameters in both dialysis groups.
- A significant(p=0.05), more frequent and severe impairment of Mini-mental test(assessing global mental functions)in seropositive group(A)(10 out of 22 patients i.e. 45.4%) ,of which 9 patients have mild affection and 1 patient moderate affection, compared to seronegative group (B)(3 out of 23 patients i.e. 13%, all of which have only mild affection).
- We did not detect any significant differences between the hepatitis C seropositive and seronegative groups in other studied parameters except borderline significant impairment of Digital span B score(measuring working memory) in seropositive group compared to seronegative one (p=0.09).

CONCLUSIONS

It may be concluded that though our hepatitis C seropositive HD patients were clinically asymptomatic(Child grade A), yet there were more frequent and severe impairment of global cognitive functions compared to hepatitis C seronegative HD patients which may reflect subclinical encephalopathy state in hepatitis C seropositive prevalent HD patients. Incorporation of cognitive functions assessment in hemodialysis patients is essential to treat early, even the asymptomatic mild cases of hepatitis C seropositive HD patients.

REFERENCES:

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		HCV Ab			P value
		-ve	+ve	Total	
Global cognitive function	Normal	20	12	32	0.05
	Mild	3	9	12	
	Moderate	0	1	1	
Visual memory	Normal	7	5	12	0.6
	Impaired	16	16	32	
Psychomotor speed	Normal	19	14	33	0.1
	Impaired	4	8	12	
Visual attention	Normal	15	10	25	0.1
	Impaired	8	12	20	
Verbal memory (immediate recall)	Normal	14	12	26	0.6
	Impaired	9	10	19	
Short term auditory memory	Normal	5	4	9	0.7
	Impaired	18	18	36	
Working memory	Normal	5	1	6	0.09
	Impaired	18	21	39	
Verbal memory (delayed recall)	Normal	13	10	23	0.4
	Impaired	10	12	22	
Intelligence	Normal	5	10	15	0.1
	High average	14	7	21	
	Superior	4	5	9	

