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TO ASSESS ULTRASONOGRAPHIC FEATURES OF THE KIDNEY IN HIV POSITIVE PATIENTS

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Abstract

Background & Method: The present study was carried out among inpatients of medical wards of Department of Medicine, Amaltas Institute of Medical Sciences, Dewas which includes 72 consecutive HIV/AIDS patients who consented to participate in the study were screened for renal disease using standard clinical and laboratory criteria.

Result: Correlation of CD4 cell count in patients with renal injury and abnormal USG finding. Patients of HIV with renal injury showed abnormal Ultrasonography finding (increase kidney size) were present in 06 patients out of 28. The number of abnormal USG (Increased kidney size) was not related to CD4 count. The correlation of abnormal USG (Increased kidney size) with CD4 cell count is <200 cell/mm3 was also statistically not significant. (P-value >0.05).

Conclusion: Average systolic and diastolic BP were found to be significantly higher in patients with renal injury indicating higher chances of renal dysfunction among those with both systolic and diastolic hypertension. Among the group of patients with renal injury, a total of 28.6 % cases were found to have abnormal renal findings on ultrasound examination. No relation was detected between CD4 count and abnormal renal findings on ultrasound.

Keywords: Ultrasonographic, kidney & HIV.
Study Designed: Observational Study.

Introduction

AIDS the Acquired Immunodeficiency Syndrome sometimes called slim disease is a fatal illness caused by a retrovirus known as Human Immunodeficiency (HIV) virus, which breaks down the body's immune system leaving the victim vulnerable to a host of life threatening opportunistic infections, neurological disorders or unusual malignancies. (Park K, 2007)[1]

Acquired Immunodeficiency Syndrome (AIDS) is a retroviral disease characterized by profound immunosuppressant that leads to opportunistic infections, secondary neoplasms and neurologic manifestations. (Cotran RS et al, 2004)[2]. HIV is transmitted by both homosexual and heterosexual contact. HIV infection is predominantly a sexually transmitted disease worldwide.

HIV has been recognized in basically everybody liquid and tissues, including blood, semen, vaginal discharge, spit, tear, bosom milk, cerebrospinal liquid, amniotic liquid and liquid acquired from bronchoalveolar lavage[3]. Regardless, no instances of HIV transmission have been recorded through transplanted organ, aside from blood and liquid terribly defiled with blood, semen, vaginal emission and bosom milk. HIV has been sent through relocated organs including kidney, liver, heart, pancreas and bone.(Rio CD et al, 2007)[4].

Material & Method

The present study was carried out among inpatients of medical wards of Department of Medicine, Amaltas Institute of Medical Sciences, Dewas which includes 72 consecutive HIV/AIDS patients who consented to participate in the study were screened for renal disease using standard clinical and laboratory criteria.

HIV positive patients admitted in Hospital, Indore during the study period which was from June 2018 to May 2019.

Exclusion criteria

Patients with Hepatitis B virus infection, diabetes mellitus, hypertension, obstructive uropathy, urinary tract infection and clinical features of glomerulonephritis (GN) preceding HIV seropositivity were excluded from the study.

After documenting the sociodemographic data, all HIV cases were evaluated on the basis of detailed clinical history which included presenting urological complaints and its duration, high risk behaviours, like history of multiple sexual partners, sexually transmitted diseases, injectable drug abuse, surgery, blood transfusion and symptoms indicative of disorders of general, renal & other system

Results

Table 1: SHOWING HYPERTENSION AMONG HIV PATIENTS

Systolic BP (in mmhg)	Renal Dysfunction	Non Renal Dysfunction	Total	P Value
<140	26 92.85%	44 100.0%	70 97.22%	P<0.05
>140 HTN	2 7.15%	0 .0%	2 2.78%	
Total	28	44	72	

In our study we observed 02 patients with hypertension (systolic BP>140 mm of Hg). Average systolic BP among patients with renal dysfunction was 115.88 ± 3.22 and mean systolic BP among patients without renal dysfunction was 114.3 ± 1.97. Systolic BP showed significant correlation with renal dysfunction indicating higher chances of renal dysfunction among the hypertensive cases. ($p<0.01$).

Table 2 CORRELATION OF CD4 CELL COUNT WITH ABNORMAL USG FINDING (INCREASED KIDNEY SIZE, ALTERED ECHOGENICITY)

(N=28)

CD 4 count cells/mm3	Abnormal USG findings (Increased kidney size)	
	No	%
<200	05	17.85
>200	01	3.57
Total	06	

Correlation of CD4 cell count in patients with renal injury and abnormal USG finding. Patients of HIV with renal injury showed abnormal Ultrasonography finding (increase kidney size) were present in 06 patients out of 28. The number of abnormal USG (Increased kidney size) was not related to CD4 count. The correlation of abnormal USG (Increased kidney size) with CD4 cell count is <200 cell/mm3 was also statistically not significant. (P-value >0.05).

Discussion

In the current investigation, out of 72 patients, 5 patients (3.5 %) had systolic BP > 140 mm of Hg and every one of them had a place with the renal brokenness cohort[5]. The relationship between renal brokenness and systolic BP> 140 mm of Hg was discovered to be genuinely huge ($p < 0.01$). Normal systolic BP among patients with renal brokenness was 116.64 +/ - 7.13 and mean systolic BP among patients without renal brokenness was 113.7 +/ - 9.26.

10.7% patients in renal brokenness bunch had diastolic hypertension. The relationship between high diastolic BP and renal brokenness was discovered to be statically critical. Likewise Emem CP et al. 2008[6] in investigation of Nigerian HIV patients discovered mean systolic BP to be 115.43+/ - 21.8 mmHg and diastolic BP to be 70+/ - 12.84 mmHg.

Mathur An et al 2002[7] contemplated 42 patients of HIV. They saw that ultrasound assessment showed loss of corticomedullary separation of kidney in 4 patients. Additionally Bhagwati SB et al 2002[8] examination in 50 patients, augmented kidney 18 (36%) was ultrasonography finding. Mill operator FH et al, 1993[9] saw by registered tomographic and ultrasound. Imaging anomalies included expanded cortical echogenicity.

Conclusion

Average systolic and diastolic BP were found to be significantly higher in patients with renal injury indicating higher chances of renal dysfunction among those with both systolic and diastolic hypertension. Among the group of patients with renal injury, a total of 28.6 % cases were found to have abnormal renal findings on ultrasound examination. No relation was detected between CD4 count and abnormal renal findings on ultrasound.

References

1. Park K. AIDS. In Park K .Park Textbook of preventive and social Medicine. 19th ed. Jabalpur: M/S Banarasidas Bhanot 2007.285-292.
2. Cotran RS, Kumar V, Collins T. Diseases of immunity. In: Robbins. Pathologic basis of disease.7th ed. Singapore: WB Saunders Company. 2004.p188-259
3. Hollander H, Katz MH. HIV infections. In: Tierney LM, Mc Phee SJ, Papadakis MA, editors. Current medical diagnosis and treatment. 42nd. ed. New York: Lange Medical Books/Mc Graw Hill; 2003. p 1272-1302.
1. 4. Rio.DC Prevention of HIV infection. In: Goldman L, Ausiello D, editors. Cecil textbook of Medicine. 23nd ed. Phiadelphia : Saunders; 2007. p 2567-2571.
4. Verma S, Annil Mahajan et al. Clinical profile of HIV/AIDS patients in Jammu. JK – Practitioner 2007; Vol. 14, No.2.
5. Emam CP, Arogundade F et al. Renal disease in HIV seropositive patients in Nigeria: an assessment of prevalence, clinical features and risk factors. Nephrol Dial Transplant; 23:741-746, 2008.
6. Mathur A Contractor et al. Renal failure in HIV/AIDS – clinical experience at Jodhpur India. Int Conf AIDS. 2002 July 7-12: 14.
7. Bhagawati SB et al. Renal disease in HIV seropositive individuals. APICON 2002.
8. Miller FH et al. Renal manifestations of AIDS. Radiographs 1993; 13 (3): 587-96.