

IDENTIFY THE HAEMATOLOGICAL MANIFESTATIONS (PERIPHERAL SMEAR) OF ALTERED HAEMATOPOIESIS RESULTING FROM HIV INFECTION.

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Article Info: Received 21 July 2021; Accepted 28 August 2021

DOI: <https://doi.org/10.32553/ijmbs.v5i8.2369>

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Conflict of interest: No conflict of interest.

Abstract

Background & Method: The present study is done with an aim to Identify the haematological manifestations (Peripheral smear) of altered haematopoiesis resulting from HIV infection, being undertaken in the department of pathology of Index Medical College, Hospital & Research Centre, Indore, M.P. HIV positive patients & susceptible family members & diagnosed in microbiology Dept. All the 200 patients were screened by ELISA technique & diagnosed by western blot.

Result: Anaemia is most commonly affected hematological parameter with 70 cases (35%, n=200) while eosinophilia is least common cases 24 (12%, n=200). Chi-sq. test X² Value = 1.46 [DF = 1] 2-sided P = 0.391 & trend in a given direction: P = 0.119. Chi-sq. test X² Value = 0.381 [DF = 1] 2-sided P = 0.38 & trend in a given direction: P = 0.675

Conclusion: Anaemia is most normal hematological boundaries of HIV positive cases. Normocytic normochromic frailty is most normal sort of sickliness in light of the fact that HIV is a persistent illness. Second most normal finding is microcytic hypochromic paleness in our concentrate because of helpless nourishment & viral impact on fe digestion Third most normal finding is macrocytic pallor likely because of Zidovudine treatment.

Keywords: haematological, manifestations, haematopoiesis & HIV infection.

Introduction

Anaemia in patients with HIV disease who are not going through antiretroviral treatment with zidovudine is regularly normochromic normocytic, albeit a gentle level of anisocytosis & poikilocytosis is normal. Macrocytosis happens in most of patients treated with zidovudine. Schistocytes are conspicuous in the setting of thrombotic thrombocytopenic indicate, which might confuse HIV contamination, as depicted in later area.

Just as being entanglement of the HIV illness itself, pallor is a persistent aftereffect of antiretroviral sedates particularly zidovudine, similarly as meds used to treat the or thwart adroit pollutions, including dapsone, primaquine, rimethoprim/sulfamethoxazole, & ganciclovir.

Discouraged erythropoiesis in AIDS has been recommended by a low or improperly ordinary reticulocyte count, & in HIV-tainted patients the reticulocyte sum can't be utilized as a dependable mark of one or the other hemolysis or dying. Like the weakness of persistent illness, all things considered, incendiary cytokines that assume a part in smothering erythropoiesis in patients of HIV disease. Growth rot component & interleukin-1 have been smother erythropoiesis in vitro, & both of these cytokines can be expanded in HIV-tainted patients. Also, the finding on bone-marrow assessment of ordinary to expanded quantities of

erythroidprogenitor cells, alongside a variable level of dyserythropoiesis, has shown that insufficient erythropoiesis might be an extra contributing component.

Sickliness is the most widely recognized hematological irregularity found in youngsters & grown-up with HIV contamination. To be sure, frailty was the underlying indication of HIV disease in around 10% of kids in a new report in Italy. The significance of finding & treating weakness in grown-up with HIV disease is highlighted by information from their review demonstrating iron deficiency to be a free prognostic consider of mortality kids with HIV contamination. The prognostic meaning of pallor at gauge is measurably critical in different review studies in grown-ups in the United States and Europe both in the pre-exceptionally dynamic antiretroviral treatment (HAART) and HAART times.

Material & Method

The present study is observational hospital based being undertaken in the department of pathology of Index Medical College, Hospital & Research Centre, Indore, M.P. over a period time from May 2019 to April 2020 years. The present study was conducted in the Department of pathology in HIV positive patients & susceptible family members & diagnosed

in microbiology Dept. All the 200 patients were screened by ELISA technique & diagnosed by western blot.

The study targeted medically diagnosed HIV positive cases with the help of ELISA technique & confirmed by western blot under the guideline of National aids control organization

(NACO, India), between the age of 5 to 69 years who are schedule to visit the hospital at regular intervals of time for routine medical review was studied.

Results

Table 01: Distribution of hematological parameters

Total No. of Case	200	% (n=200)
Thrombocytopenia	45	22.5%
Eosinophilia	24	12%
Leucopenia	61	30.5%
Anaemia (Hb%)	70	35%

Anaemia is most commonly affected hematological parameter with 70 cases (35%, n=200) while eosinophilia is least common cases 24 (12%, n=200).

Table 02: Data analysis Sex distribution of hematological parameters

Parameters	Female	Male
Thrombocytopenia	25.41%	21.70%
Eosinophilia	15.82%	17.92%
Leucopenia	29.28%	28.69%
Anaemia	60.18%	78.67%

Chi-sq. test X2 Value = 1.46 [DF = 1] 2-sided P = 0.391 & trend in a given direction: P = 0.119

Table 03: Data analysis- Distribution hematological Parameter- Anaemia

Parameters	Female	Male
Normocytic Normochromic Anaemia	52.89%	61.73%
Microcytic Hypochromic Anaemia	32.72%	23.34%
Macrocytic Anaemia	17.27%	16.33%

Chi-sq. test X2 Value = 0.381 [DF = 1] 2-sided P = 0.38 & trend in a given direction: P = 0.675

Discussion

Anaemia is characterized when Hb% < 13gm/dl for male & Hb<12gm/dl for female with the reference of WHO sickness models & different investigations.

In our review shows comparative outcomes as Deepak Arora et al. in the longitudinal changes in hematological indication of HIV disease in the multicentre AIDS companion study in division of microbial science, more than a long term timeframe from 2007 to 2009. In this review paleness in males was answered to be 89% while in female 71.4%. Comparable aftereffect of our review to be found by Ajay Wanchu et al. in the "profile of hematological irregularity of Indian HIV tainted person" in PGI Chandigarh over a time of a long time from 2007-09 India when test size n=200. This concentrate additionally shows that pallor is most normal hematological finding in HIV positive cases. Frailty was accounted for in seen 65.5% cases (131/200) (BMC blood problems 2009, 9:5doi:10-1186/1417-2325-9-5. Our review had comparable outcomes as given by A. A. Amballi et al. in review investigation of "Segment design & hematological

profile in individuals living with HIV/AIDS" in a University Teaching Hospital Sagamu, Ogun State more than a five years timeframe from 2000 to 2005. [Scientific Research & Essay vol. 2 (8) pp v 315-318 August 2007) (Sample size n=162)]. Iron deficiency 74% when test size were 162 HIV good cases & furthermore by Donald W North Felt et al in "the extensive, state-of-the-art data on HIV/AIDS treatment anticipation & strategy" from the college of California San Francisco since Feb. 1998.

Conclusion

Anaemia is most normal hematological boundaries of HIV positive cases. Normocytic normochromic frailty is most normal sort of sickness in light of the fact that HIV is a persistent illness. Second most normal finding is microcytic hypochromic paleness in our concentrate because of helpless nourishment & viral impact on fe digestion Third most normal finding is macrocytic pallor likely because of Zidovudine treatment.

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