



TO EVALUATE THE CAUSE AND DIAGNOSIS OF BICYTOPENIA AT TERTIARY CARE CENTRE OF CENTRAL INDIA

Hematology

Dr. Rashmi Panthi Resident Medical Officer In Mgm Medical College Indore

Dr. Amit Kumar Semil Resident Medical Officer In Mgm Medical College Indore

Dr Meena Singrol Senior Resident Medical Officer in ABV government Medical College Vidisha

Dr Sandeep Bhandari Senior Resident in ABV Government Medical College Vidisha

Dr Mohammad Wasif Manzoor Resident Medical Officer In Mgm Medical College Indore

Dr. Venus Khan* Resident Medical officer In MGM Medical College Indore *Corresponding Author

KEYWORDS

INTRODUCTION-

Bicytopenia is the reduction of any of the two cell lines of blood, i.e., erythrocytes, leukocytes, or platelets. Peripheral cytopenia is a common hematological problem in our day-to-day clinical practice resulting from various diseases ranging from transient infection-induced bone marrow suppression to life threatening hematological malignancies. Any two of them necessary for diagnosis that is hemoglobin <10 gm/dl, leucocyte count <4000, and platelet count <1.0 lac /cubic millimetre of blood. In order to establish the cause of Bicytopenia, bone marrow aspiration is needed.

AIMS AND OBJECTIVES-

The aim and objective of this study are to know the clinicopathological profile, hematological analysis, and importance of bone marrow evaluation in cases of Bicytopenia in the patients of age group 10-60 yrs, admitted to a tertiary care teaching hospital.

MATERIALS AND METHODS-

This is a retrospective, observational study, conducted in the pathology department, M.Y Hospital, Indore, Madhya Pradesh from 2020 to 2022. The patients in the age group of 10-60 yrs of age admitted with new onset bicytopenia who underwent hematological analysis and bone marrow examination in our hospital were included in this study. The patients with bicytopenia evaluated outside/treated in other hospitals were excluded from our study. Data were obtained from bone marrow aspiration register from the pathology department and hospital wards.

OBSERVATION AND RESULTS-

In this study Pallor, bleeding, hepatomegaly and splenomegaly were most frequent in these patients.

Table- 1 Out of the 40 patients age group distribution mentioned above.

Gender	Percentage
Male	57%
Female	43%

Table- 2 Different Bone Marrow findings in cases studied.

Bone Marrow Findings	Percentage
Megaloblastic anemia	55 %
Dimorphic anemia	20 %
ITP	10 %
Myelodysplastic Syndrome	7.5 %
Acute leukemia	5.0 %
Hemophagocytosis lymphohistiocytosis	2.5 %

Table-3 Age wise distribution mentioned above.

Age Distribution	Number Of Cases	Percentage
10-20 YRS	11	27.5 %
21-30 YRS	14	35.0 %

31-40 YRS	06	15.0 %
41-50 YRS	04	10.0 %
51-60 YRS	05	12.5 %

DISCUSSION & CONCLUSION-

We observed that In our study, the most common aetiology for bicytopenia is megaloblastic anaemia followed by dimorphic anaemia. Most common age group affected is 21-30 yrs of age (35.0%) followed by 10-20 yrs (27.5%). Anaemia with thrombocytopenia is more common (57%) finding than Leucopenia with thrombocytopenia (43%).

Bicytopenia is very important clinical and haematological problem with extensive differential diagnosis.

REFERENCES-

- Yalaki Z, Icoz S, Arikani FI. Our experience with bicytopenia in patients treated at the Ankara hospital pediatric clinic. J Pediatric Inf. 2014;8:23-7.
- Chhabra A, Chandar V, Gupta A, et al. Megaloblastic anaemia in hospitalised children. JACM 2012;13(3):195-7.
- Iqbal SP, Kakepoto GN, Iqbal SP. Vitamin B12 deficiency--a major cause of megaloblastic anaemia in patients attending a tertiary care hospital. J Ayub Med Coll Abbottabad 2009;21(3):92-4.
- Gomber S, Kela K, Dhingra N. Clinico-hematological profile of megaloblastic anemia. Indian Pediatr 1998;35(1):55-8.
- Athar R, Khonglah Y, Raphael V, et al. Clinico-hematologic and biochemical profile of dimorphic anemia with bone marrow study. The Internet Journal of Laboratory Medicine 2014;6(1).