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Research Paper

An Epidemiological Study on Incidence of Thalassemia in Tribal Children of Chotanagpur Block, Jharkhand, India.

Medical Science

KEYWORDS : thalassemia, tribal children

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ABSTRACT

Aim: A study was done on the incidence of thalassemia on different communities in tribal areas of Jharkhand, India. Methodology: Blood and urine examination were taken of total 100 children of different age group and both sex. Results: There were 8 cases of hemoglobin disorder and 2 thalassemia detected. Conclusions: there was 2 % incidence of Thallasemia detected on different communities in Chotanagpur block of Jharkhand.

INTRODUCTION

The real debt of modern science in the field of medicine is the knowledge about the structure of Hemoglobin. In 1925 Collin gave first description of Thallasemia[1] This study was done to reduces the burden of haemoglobin abnormalities in Chotanagpur plateau by doing mass screening programme in the area where its incidence was significant. Till date it is not feasible to screen whole population so that this study will help to screen only those populations where its incidence is significant.

MATERIAL & METHOD :

Subjects:

A total of 100 children of age 0 to 7 years and both sex male and female were randomly selected. Study was done during period of july 1994 to december 1996.

Procedure:

The attendant of entire subject signed an informed consent approved by ethical committee of Rajendra Medical College, Ranchi, Jharkhand, India. A complete assessment , blood and urine examination were done to entire subjects.

OBSERVATION:

A total of 100 children irrespective of their complain, age and sex belongs from different tribes of Chotanagpur, Jharkhand were taken to explain the incidence of thalassemia

Among 100 children 50 were Oraon and 40 were Mundas and 10 were of other tribes. There were 8 cases of hemoglobin abnormalities and only 2 thalassemia major detected.

Result:

Data was analyzed by MS Office software.

Table. 1: different age group of children.

AGE IN YEARS	0 TO 3		4 TO 7		8 TO 10		11 TO 12	
SEX	M	F	M		M	F	M	F
THALASSAEMIA	1	0	1	0	0	0	0	0
TOTAL	1		1		0		0	

Table. 2: different tribes

TRIBES	NO. OF CASES	%
Oraon	50	50
Munndas	40	40
Others	10	10
TOTAL	**100**	100

Table. 3: Hematological finding

	Case 1	Case 2
HEMAGLOBIN	6.8	7.4
RETICULOCYTE COUNT	5.3%	8.1%
MCV	36	27
MCH	92.3	93.1
MCHC%	32.78	27.40
ANISOCYTOSIS	++	+++
POLYCHROMASIA	+	++
POIKILOCYTOSIS	-	++
TARGET CELL%	7.5	9.6
SICKLE CELL	-	-
ELECTROPHORESIS PATTERN	AF pattern	AF pattern

SUMMARY:

The data were collected from different blocks of Chotanagpur area . They were divided into groups according to age, sex and tribes. In each case hemoglobin was studied. As this area of Chotanagpur is inhabited by mainly two tribes namely Munda and Oraon,[4,5] so out of 100 cases 80 were of these two groups. Among 100 cases 8 cases of hemoglobin disorder were detected and of these 8 cases 2 were of thalassemia

Thus incidence of thalassemia in this study was 2% and is very near to the result obtain by Karan et al who showed incidence with oraon group upto 1.5%. Both the cases were male and below 7 years. Similar study was done in Asley et al. series of 6 patients. Though the disease actually manifests in early infancy but delay in diagnosing is due to lack of awareness among the population. Patients generally come to hospital when manifestation is severe.

In thalassemia,[2,3] anemia is generally very profound when first detected and many times pallor become the presenting complain. In present study hemoglobin of the patients were 6.8% and 7.4%. Characteristic peripheral smear of hypochromic, microcytic anemia and target cell of thalsemia were present in all the cases.

Both the patients present in the OPD with acute infection and workup for severe anemia clinches the diagnosis. One of the two patient has typical mongloid facie, first described by Colley and Les(1925).[1]

Relevance to clinical practice:

High incidence of hemoglobin disorder were detected in this area, that's why antenatal screening and marriage counseling should be promoted in this area to decrease the incidence of hematological disorder.

CONCLUSION:

Study was concluded that highest number of hemoglobin disorder was seen in the age group of 0-7 years and more common in male. Symptom wise analysis showed that all cases were pallor irregular fever, weakness and hepatosplenomegaly. All the cases were stunted growth and one typical mongloid facie.

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