The burden of Beta thalassemia in Tribals : A cross sectional study

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Introduction

The tribal population groups form about 635 biological isolates (tribes and sub tribes) whichconstitutes 8.08% (about 84.3 million) of the total population of India. These are known to bevulnerable to a majority of heritable disorders like thalassemia. Haemoglobin consists of haem and globin chains. The electrophoresis of normal adult haemoglobinreveals HbA which has molecular structure (á2â2) and the minor components HbF (á2ã2) and HbA2(á2ä2). In Individuals with two â thalassemia alleles (â0/â0 or â0/ â+ or â+/ â+) is referred to have âthalassemia major. Heterozygote carrying one normal gene and one â thalassemia gene (â0/â or â/â+) is referred to have â thalassemia trait. We have hypothesize that in tribals there is closeassociation with beta thalassemia trait.

Method

Eighty samples were taken from ante- natal tribal women attending antenatal clinic and hospital basedcross sectional study was done. About 2-3 ml blood was collected after obtaing Inform Consent.Haematological Indices were measured using Sysmax cell counter. Background information of eachindividual like age, caste, consaguity etc were also recorded. Haemoglobin Electrophoresis wascarried out using BIORAD HPLC. The value of HbA2 more than 3.5% was taken as cut off point forbeta thalassemia. The data was then analysed and mean, median & prevalence was calculated.

Results

Median age was 19 and 48.75% of the tribals were illiterate. The mode is the 3rd trimester in whichwomen was screened. 32.5% of women were found anaemic and 76.25% had low MCV values.11.25% of the tribals were having Beta thalassemia trait, but the trait was more prevalent towards thetwo such tribes Murmu's and Soren's, rather than involving the whole population.

Conclusion

The prevalence of Beta thalassemia among tribals was found to be 11.25%. The risk to particulargroup is far more than the whole tribal population.

Keywords: Beta thalassemia; Tribal.