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Haematological investigation and severity of haemoglobin deficiency in rural population around vaijapur tehsil of aurangabad district (M.S.)

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ABSTRACT

The present study intends to evaluate the haematological parameters among the rural population of Vaijapur tehsil. During a period of four months i.e. June 2011 to September 2011.During this period of four month total number of 800 samples was examined for Haemoglobin deficiency (Anaemia), out of which 381 samples of male and 419 samples of female of different age groups. The percentage being about 65.09% and 84% in both male and female population were anaemic in rural population of Vaijapur tehsil.

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Introduction

Common Name: Haemoglobin. Alternative Name: Hemoglobin

The haemoglobin level is expressed as the amount of hemoglobin in grams (gm) per decilitre (dl) of whole blood, a decilitre being 100 millilitres. The normal ranges for haemoglobin depend on the age and, beginning in adolescence, the sex of the person. The normal ranges are: Newborns: 17-22 gm/dl, One (1) week of age: 15-20 gm/dl, One (1) month of age: 11-15gm/dl, Children: 11-13 gm/dl, Adult males: 14-18 gm/dl, Adult women: 12-16 gm/dl, Men after middle age: 12.4-14.9 gm/dl, Women after middle age: 11.7-13.8 gm/dl. All of these values may vary slightly between laboratories. Some laboratories do not differentiate between adult and "after middle age" hemoglobin values. Low hemoglobin is referred to as being anemic. There are many reasons for anemia. Some of the more common reasons are loss of blood (traumatic injury, surgery, bleeding colon cancer), nutritional deficiency (iron, vitamin B12, folate), bone marrow problems (replacement of bone marrow by cancer, suppression by chemotherapy drugs, kidney failure), and abnormal hemoglobin (sickle cell anemia).

Rural India contains over 68% of India's total population with half of it living below poverty line, struggling for better and easy access to health care and services. Health issues confronted by the rural people are diverse and many - from severe malaria to uncontrolled diabetes, from a badly infected wound to cancer. The National Rural Health Mission (NRHM) was launched in April 2005 by the Government of India. The goal of the NRHM is to provide effective healthcare to rural people with a focus on 18 states, which have poor public health indicators and/or weak infrastructure. According to WHO there should be one qualified doctors for every 3500 people and one well equipped hospital for every 10000 people but till we are far away from these in rural area.

Studies from India have consistently shown an association between anaemia and under-nutrition and the occurrence of anaemia in undernourished children and in those belonged to the poor socioeconomic status are a well-documented fact . But studies have also revealed that anaemia was a major health problem among the well-nourished school children who belonged to the upper and middle socio-economic classes also. The low-cost food that is generally affordable to the poor is low in nutritional value and high in fats, sugars and additives and therefore, obesity is oftentimes a sign of poverty and malnutrition.

The rural populations, who are the prime victims of the policies, work in the most hazardous atmosphere and live in abysmal living conditions. Unsafe and unhygienic birth practices, unclean water, poor nutrition, subhuman habitats, and degraded and unsanitary environments are challenges to the public health system. The majority of the rural population are smallholders, artisans and labourers, with limited resources that they spend chiefly on food and necessities such as clothing and shelter. They have no money left to spend on health. The rural peasant worker, who strives hard under adverse weather conditions to produce food for others, is often the first victim of epidemics. This present paper attempts to review critically the current health status of India, with a special reference to the vast rural population of the beginning of the twenty first century.

Vaijapur, situated on the Narangi river about 40 miles west of Aurangabad in 19° 56' 41 north latitude and 740° 46' 14 east longitude, is a municipal town and headquarters of the tahsil of the same name. The people of Vaijapur taluka majorly dependent on farming, literacy percentage is about 80%. This area is comes under low rain fall so socioeconomically these people are backward.

Material and method:-

During the course of present investigation, spread over four months (from June 2011 to September 2011),During this period

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Table 01: Prevalence of anaemia in male and females of Vaijapur Tehsil, based on diffrent age groups.

Age groups (years)	Male		% of Anaemia	Female		% of Anaemia
	<13g/dl	>13g/dl		< 12g/dl	>12g/dl	
0 to 15	85	06	93.40	53	09	85.43
16 to 30	79	71	52.66	189	39	82.89
31 to 45	38	30	55.88	58	11	84.05
46 to 60	28	15	65.11	31	06	83.78
61 onward	18	11	62.06	21	02	91.30

of four month total number of 800 samples was examined, out of which 381 samples of male and 419 samples of female of different age groups. an extensive survey was carried out to record the incidence of haemoglobin percentage in rural population around Vaijapur tehsil in Aurangabad region. For this study blood samples were collected from different Villages around Vaijapur tehsil and were examined for Haemoglobin deficiency. Measurements were done with a CBC automatic blood cell counter of Trivetron Company in pathological laboratory.

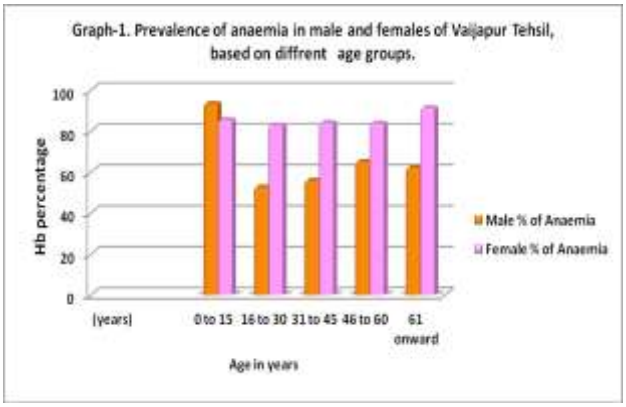
Haemoglobin deficiency (Anaemia) was defined as an Hb of <13g/dl in males and an Hb of < 12g/dl in females. Mild anaemia was defined as an Hb of 10-12.9 g/dl in males and an Hb of 10-11.9 g/dl in females. Moderate anaemia was defined as an Hb of 7-9.9 g/dl and severe anaemia as an Hb of < 7 g/dl in both males and females.

Results and Discussion:-

During the present study a comparative analysis has been made of the prevalence of anaemic condition in different age groups male and female population. The study was based on samples collected from various villages of Vaijapur tehsil in Aurangabad district of Maharashtra, during a period of four months i.e. June 2011 to September 2011. During this period of four month total number of 800 samples was examined, out of which 381 samples of male and 419 samples of female of different age groups. The percentage being about 65.09% and 84% in both male and female respectively. The five different age groups i.e.0-15 years, 16-30 years, 31-45 years, 46-60 years and 61 to onwards were studied for prevalence of anaemic condition. Prevalence of anaemia in male and female population of different population are shown as follows, Prevalence of anaemia in male population of different age groups are shown as follows, 0-15 years old male is 93.40% (below 13 gm/dl), 16-30 years old male shows 55.66%, 31-45 year old male d55.88%, 46-60 year old 65.11% and 61 onward person shows 62.06% anaemic person.

Prevalence of anaemia in female population of different age group are as follows 0-15 year old female shows 85.43%(below 12 Hb/dl) like this 16-30year old female shows 82.89%, 31-45 year old female shows 84.05 % , 46-60 year old female shows 83.78 % and 61 to onward female shows 91.30% anaemic female. The above data shows that 65.09% male population and 84% female population were anaemic in rural population of Vaijapur tehsil.

The above data calls for greater participation of the government in the health care of rural population. To improve the prevailing situation, the problem of rural health is to be addressed both at the macro (national and state) and micro level (district and regional), in a holistic way, with genuine efforts to bring the poorest of the population to the centre of the fiscal policies. A paradigm shift from the current 'biomedical model' to a 'sociocultural model' is required, to meet the needs of the rural population. A comprehensive revised National Health Policy addressing the existing inequalities, and work towards promoting a long-term perspective plan exclusively for rural health is the current need.



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