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Assessment of Nutritional Status of the Khairwar Tribal Children of Madhya Pradesh, India

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KEY WORDS Malnutrition. Age Independant Ratios. Khairwar Tribe. Anthropometry.

ABSTRACT Age independent parameters were applied for assessment of nutritional status of 129 Khairwar tribal children (aged 2 to 7 years) of Surguja District of Madhya Pradesh. Incidence of malnourished children was 42.63%, 74.42% and 70.54% . Nutritional status was assessed from mid-arm circumference, weight height^2 and mid-arm circumference head circumference ratios respectively. The latter two ratios are found reliable parameters for assessment of nutritional status.

INTRODUCTION

Malnutrition has emerged out to be as a major health problem is our country. Studies, carried-out in various parts of the country have confirmed that malnutrition exist among the poorest section of our population (ICMR, 1984). Children and women in productive period appears to be the worst sufferers (ICMR, 1984). Nutritional assessment has been done using nutritional anthropometry in urban and rural children, but not so frequently in rural tribal children. Therefore, nutritional survey of tribal children is an important component for the welfare of the children. Keeping this in view present study has been carried out in Khairwar tribal children (aged 2 to 7 years) of Surguja district of Madhya Pradesh, to study the extent of malnutrition in these children.

Khairwar is a primitive tribal strain inhabiting Madhya Pradesh and Bihar. In Madhya Pradesh, they are mainly distributed in Surguja district. According to Census, 1981 total Khairwar population in this district is about 6,173. They are endogamous, patrilineal and are still at a primitive stage of agriculture (Sharma, 1989). Their main diet is rice, maize, *Kulthi* (cereals) and pulses.

MATERIAL AND METHODS

129 Khairwar tribal children (age groups 2 to 7 years) were studied from four villages namely, Chapda (Surajpur *Tehsil*), Anjni (Pratappur *Tehsil*), Harra (Manendragarh *Tehsil*) and Pandri (Wadafnagar *Tehsil*) of Surguja district. Every child was measured for body weight, height, head circumference and mid-arm circumference. These measurements are known to evaluate age independent nutritional anthropometric measures of malnutrition, *viz.*, weight/ height^2 ratio, mid-arm circumference/ head circumferences ratio (Rao and Singh, 1970; Kanawati and McLaren, 1970).

Reliability of age independent ratio *i.e.* weight / height^2 and mid-arm circumference / head circumference have been established by several studies for understanding the magnitude and dimension of protein caloric malnutrition especially in the rural tribal population where estimation of correct age is difficult (Gupta and Bhandari, 1974; Gupta et al., 1979, 1981;

Prasad et al., 1975; Ghosh and Tejaswini 1976 and Sen et al., 1980) whereas mid-arm circumference detects only marginal malnutrition (Kanawati and McLaren, 1970).

Children with mid-arm circumference below 12.6 cm were recorded as malnourished children (Kanawati and McLaren, 1970). Children having weight / height^2 below 0.0015 (Rao and Singh, 1970) and mid-arm circumference/ head circumference ratio 0.310 (Kanawati and McLaren, 1970) were taken as malnourished and above as normal children.

RESULTS AND DISCUSSION

The present study revealed that mid-arm circumference detected 55 children (42.63%), weight/height^2 ratio diagnosed 96 children (74.42%) and mid-arm circumference/ head circumference detected 91 children (70.54%) out of 129 children as malnourished. It can be concluded that age independent ratio such as weight/height^2 and mid-arm circumfefence/ head circumference are reliable parameters for assessment of nutritional status in rural areas where correct age of children is not known.

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