

Risk Factors Associated With Rickets in Infants and Children Aged 6-59 Months Attending Kiambu District Hospital, Kenya

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There are increased reported cases of rickets in Kenya coupled with scanty data on its cause. This study was carried out to determine risk factors associated with rickets for pediatric infants and children attending Maternal and Child Health clinic at Kiambu district hospital. A cross sectional analytical survey design was used. Systematic random sampling was used to select 377 infants and children in addition to their mothers and care givers for data collection. Simple random sampling was used to choose 39 subjects for dietary intake survey. Convenience sampling was used to select nine health care providers. Data collected included demographic, social economic, anthropometric, dietary, sun exposure practices, health seeking behaviour and morbidity using structured and semi-structured questionnaires. The data were analyzed using Statistical Package for Social Sciences version 17.0 and tested for significance at $p < 0.05$. Chi square test was computed to study the relationships between categorical variables and occurrence rickets. Means of dietary intake data between rachitic and non rachitic subjects were compare using t-test. Odds ratio was computed to establish the factor likely to contribute to rickets development in the study population. Rachitic subjects had a mean age of 13.8 months and birth weight of 3.07kg. It was found that urban subjects were more likely to develop rickets than their rural counterparts. Rickets was significantly related to urban (66.7%) than rural (33.3%) set ups at $p < 0.002$. Percent of underweight among rachitic subjects was 37.9%. Most frequently consumed foods by rachitic subjects were fruits (95.9%), spinach (92.6%) and unfermented porridge (88.5%). Rickets was more likely to develop in subjects consuming spinach than those not consuming it. Dietary intake of vitamin D was below recommendations. Fully dressing infants (32.4%) was more likely to predispose them to rickets than partly Q. (fully undressing them ($p < 0.001$). Rachitic subjects (34.3%) were chronically suffering from respiratory tract infections. There was a significant association between morbidity and occurrence of rickets ($P < 0.002$). Rickets was a disease of infancy and early childhood, associated with various factors. The disease could be suspected in subjects living in urban areas and those suffering from respiratory tract infections irrespective of gender, income, occupation or family size. Child health care players should consider sun exposure awareness and rickets screening plan on infants and children suffering from respiratory tract infections.