

Evaluation of Rickets in a Developing Country: Presentation and Risk Factors

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ABSTRACT

Background: Rickets is a preventable mixed group of acquired and inherited diseases causing disturbances in calcium and/or phosphate homeostasis that affect the growing skeleton disease of growing children and adolescents, leading to the softening and weakening of bones. This study aims to describe the presentation of Rickets in children attending a tertiary hospital in a developing tropical country.

Methods and Materials: The study design is cross-sectional and hospital-based. The study data was collected from hospital records and utilized clinical history, clinical examination, and results of laboratory investigations. The collected data was analyzed by SPSS v27.

Results: The mean age of the rickets children included in the study was (22.3 ± 15.1 months). Male (55.4%) children are more present than females (44.6%). About 80.4% (45) of the children were from families with low socioeconomic status. Most children's fathers (53.6%) have a good educational background compared to their mothers (44.7%). Children who received breastfeeding accounted for 42 (75%), while those who did not breastfeed accounted for 14 (25%). Most children are exposed to sunlight less (73.2%). The majority (92.9%) of children were underweight. Male (55.4%) children are affected more than females (44.6%). Rachitic rosary (75%) and wrist swelling (69.6%) are the most common manifestations. About 92.9% of screened children had both hypocalcemia and hypophosphatemia. The alkaline phosphatase enzyme increased 91% (51) of the studied cases.

Conclusion: Low socioeconomic status, low exposure to sunlight, and mothers' educational background were essential in developing Rickets among the studied children. Rickets affected Male children more than females, and Rachitic rosary and wrist swelling are the most common manifestations. Most of the children showed positive laboratory findings.

Keywords: Rickets; Socioeconomic Status; Rachitic Rosary; Breastfeeding; Children.

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