PREVALENCE OF RICKETS AND ANEMIA COMORBIDITIES IN YOUNG CHILDREN WITH FUNCTIONAL INTESTINAL DISORDERS

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Background and aims: In pediatric practice, functional intestinal disorders (FIDs) frequently coexist with systemic conditions such as iron-deficiency anemia and rickets, creating a complex clinical picture. Despite the high incidence, the specific biochemical relationship between vitamin D levels, calcium homeostasis, and the severity of anemia in children with different FID phenotypes (K59.0, K59.1, K59.9) has not been sufficiently studied. To analyze the prevalence and correlation of comorbidities, specifically rickets and varying degrees of anemia, among children aged 1–3 years diagnosed with FIDs.

Materials and Methods: A prospective study was conducted at the clinic of Urgench state medical institute, Khorezm region, Republic of Uzbekistan, involving 144 children aged 1–3 years diagnosed with various forms of FIDs. To confirm metabolic disturbances, biochemical blood analysis was performed to measure serum 25-hydroxyvitamin D and total calcium levels.

Results: The analysis revealed a high frequency of comorbidities across all groups, with rickets often occurring alongside different stages of anemia: Group K59.9 (Unspecified FID): The highest incidence of rickets was observed in children with Grade II anemia (61.8%; n=47), followed by Grade I (13.1%; n=10) and Grade III (10.5%; n=8). Group K59.1 (Functional Diarrhea): Rickets was identified in 53.6% (n=22) of children with moderate (Grade II) anemia, 24.3% (n=10) with Grade I, and 4.8% (n=2) with Grade III. Group K59.0 (Functional Constipation): Rickets was present in 37% (n=10) of children with Grade II anemia and 33.3% (n=9) with Grade I. Severe anemia (Grade III) accompanied rickets in only 3.7% (n=1) of cases.

Conclusion: The development of FIDs in early childhood is significantly influenced by a synergy of early developmental risk factors and concurrent anemia. The high prevalence of biochemical vitamin D and calcium deficiencies necessitates an integrated diagnostic protocol that accounts for both the child's medical history and their current metabolic status.