Poster Presentation on Vitamin D [Serum 25(OH) cholecalciferol] Insufficiency is Associated with Childhood Asthma: Recent Findings among Bangladesh Children’’

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Dr. Nabila Tabassum, Core Trainee, Dept of Pediatrics, University hospital Leicester, shared with Medical Research Unit (MRU), AWMC her poster presentation titled “Vitamin D [Serum 25(OH) cholecalciferol] Insufficiency is Associated with Childhood Asthma: Recent Findings among Bangladesh Children’’ which was formerly presented as poster at the Royal College of Pediatrics and Child health (RCPCH) conference in Glasgow, Scotland in January 2023.

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Background:
Vitamin D has a role in asthma due to its effects on airway epithelium, bronchial smooth muscle & immune-modulatory effects on innate and adaptive immune systems. Lower level of S.25(OH) cholecalciferol is associated with increased childhood asthma prevalence, less responsiveness to corticosteroids, frequent exacerbations, increased disease severity & hospitalizations. We examined interaction between childhood asthma & Vit. D.

Objectives:
Assess the clinico-epidemiological features of childhood asthma, aiming to determine if Vitamin D among asthmatic children (cases) differ from that of non-asthmatic ones (controls).

Methods:
- Study Type: Case control study
- Place of Study: Child asthma clinic, Bangladesh Shishu Hospital & Inst.
- Case: Asthmatic children, (2-12 years), diagnosed based on the GINA
- Control: Age & sex-matched children having no respiratory illness.


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Results:
Children with asthma between the ages of 2 and 12 were the respondents whereas children with no respiratory illness served as the control group. Around 60% of the asthma case group had vitamin D deficiency, compared to the control group’s adequate vitamin D levels. Insufficient/deficient S. Vitamin D level was detected in a significantly higher (p 0.01) percentage of asthmatic children compared to the control children.

Conclusion:
Mean levels of S. Vitamin D were significantly lower among asthmatic children compared to controls. Significantly higher (p<0.01) proportion of asthmatic children had insufficient/deficient S. Vitamin D status compared to controls. Likelihood of having Low Vitamin D (deficient + insufficient) is 3.4 times higher in asthmatic patients than non-asthmatic control. Low vitamin D status remain a predictive factor for developing asthma.