

Effect of vitamin D supplementation on irritable bowel syndrome symptom severity and quality of life

Claire E. Williams¹, Elizabeth A. Williams² and Bernard M. Corfe^{1,3}

¹*Molecular Gastroenterology Research Group, Academic Unit of Surgical Oncology, Department of Oncology & Metabolism, University of Sheffield, Beech Hill Road, Sheffield, S10 2RX,*

²*Department of Oncology & Metabolism, University of Sheffield, Beech Hill Road, Sheffield, S10 2RX and*

³*Insigneo Institute for In Silico Medicine, The University of Sheffield*

Irritable Bowel Syndrome (IBS) is a common functional disorder of the gastrointestinal tract, affecting 17% overall of the UK population⁽¹⁾. The aetiology of this disorder is unknown, although it has been linked to environmental, psychological and social factors⁽²⁾. Vitamin D deficiency and insufficiency is common within the IBS population⁽³⁾, and vitamin D has been hypothesized as a potential remedy. We sought to test whether vitamin D supplementation improved symptoms or quality of life in IBS.

One hundred and thirty six volunteers were randomised to receive either a vitamin D (3000IU p.d.) or placebo oral spray in a 12-week double-blind, placebo-controlled, parallel design study. Power calculation was estimated from a pilot study⁽⁴⁾. Quality of life (QoL) and serum vitamin D were determined at baseline and exit, symptom severity was assessed fortnightly across the study. Data were analysed using SPSS (IBM SPSS Statistics for Windows, V.23; IBM Corp.).

One hundred and twenty five participants (n = 66, treatment, n = 59, placebo) were included in the final analysis. Baseline data showed no differences in baseline demographics or symptomology between groups. After 12 weeks there was a significant improvement in the vitamin D status of participants randomised to receive vitamin D (p = 0.005, t-test). Symptom severity was assessed across the study by trial arm. There was no difference between active and placebo (p = 0.845, repeated measured ANOVA). QoL showed no difference between baseline and exit for either trial arm (p = 0.415, t-test). There was no association between increase in vitamin D and change in symptoms (r = -0.071 p = 0.434, Spearman's rho), nor increase in vitamin D and change in quality of life (r = -0.031 p = 0.733, Spearman's rho).

Vitamin D insufficiency was prevalent in this sample⁽⁶⁾ confirming previous studies. Supplementation was efficacious. Patients with IBS should be tested for vitamin D status and, where appropriate, supplemented. In contrast to previous reports, this study shows no benefit of vitamin D supplementation on IBS symptomology.

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