E-Poster

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Probiotics and Bowel Function in Spinal Cord Injury: A Randomized, Placebo Controlled, Double Blind Study

Topic: Miscellaneous

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BACKGROUND

Gut dysbiosis is a common complication following spinal cord injury (SCI), considered as a significant comorbidity with broad pathological effects, including impaired gastrointestinal function. Probiotics have the potential to restore intestinal microbiota (IM) balance and alleviate associated complications. However, research on probiotics' effects in SCI patients remains limited. This pilot study investigates the impact of probiotics on bowel function in individuals with SCI and their therapeutic potential in this population.

METHODS

We conducted a double-blind placebo-controlled trial, including 49 chronic SCI patients divided into two groups: intervention group (G1) (n=24) and control group (G0) (n=25), each group received two capsules, once a day for two months. The intervention group took the probiotic "Lactéol 340 mg" containing strains of Lactobacillus fermentum and Lactobacillus delbrueckii at a concentration 10 billion CFU (Colony-Forming-Unit). The placebo group took the "placebo" capsules containing starch with the same pharmaceutical presentation as the probiotic. Neither the patient nor the doctor knew the content of the capsules. Baseline and two months assessment was made. Our primary outcome was the neurogenic bowel dysfunction (NBD) scale. Secondary outcomes were Bristol stool scale (BSS) and quality of life (QoL) assessed by SF-36.

RESULTS

The NBD score improved in both groups. Comparative analysis did not demonstrate a between-group difference (p = 0.308). None of the SF-36 domains revealed a significant difference between groups, but mental health domain showed a significant improvement with $p<0.05$ in both groups. Overall results indicate a predominant placebo effect which may essentially be due to the subjective outcome measurement tools and the nutritional type of the trial which is associated to more placebo effect than pharmacologic trials.

CONCLUSION

Probiotic intervention showed no significant advantage over placebo in improving neurogenic bowel dysfunction, stool consistency, or QoL in chronic spinal cord injury patients. Larger, longer-term studies are needed to explore probiotics' potential benefits on bowel function and well-being in this population.

Statement of Disclosures

None

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