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TITLE: Probiotic (VSL#3) for Gulf War Illness

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14. ABSTRACT: The overall objective of the study is to determine the effect of probiotic Visbiome™ on: 1) Intestinal symptoms of Irritable Bowel Syndrome (IBS) and 2) Non-intestinal symptoms (fatigue, joint pain, insomnia, general stiffness and headache) associated with IBS, the symptoms of Gulf War (GW) illness, 3) Serum pro- and anti-inflammatory cytokines, 4) fecal microbiota. The manuscript on The Effect of probiotics on IBS and GW illness was published in Oct, 2022. The effect of probiotics on serum cytokines was presented on Oct 25, 2022 in the Am Gastroenterology Conference. The stool samples analysis is ongoing.					
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Introduction:

Gastroenteritis plays a major role in changing intestinal microflora. More than one third of Gulf War (GW) veterans report gastroenteritis during deployment and it is a risk factor for development of irritable bowel syndrome (IBS) after deployment. We also demonstrated that there is a strong association between IBS and extra-intestinal disorders (e.g. fatigue, joint pains, insomnia, generalized stiffness, and headache). This would suggest that IBS as well as extra-intestinal disorders in GW veterans have a unifying etiology. There is scientific evidence that probiotics by restoring normal gut flora improve symptoms of IBS. Probiotics have also been shown to improve arthritis and fatigue by changing fecal flora. This is the basis for our present protocol to study the effect of probiotics on GW illness.

Body:

The following goals have been accomplished:

The manuscript, The Effect of Probiotics on IBS with GW illness was published in the peer reviewed journal. *Fed Pract.* 2022 October;39(10):410-417 | 10.12788/fp.0322

The “Effect of Probiotics on serum cytokines in Irritable Bowel Syndrome with Gulf War illness” was presented as a poster in the American College of Gastroenterology annual meeting, 2022..

The previous collaborator at Laurence Berkeley Laboratory, CA retired last year and is no longer available to complete the stool microbiota analysis. We found another collaborator in South Carolina who agreed to complete the analysis. The stool samples were transported to V.A. Medical Center in Charleston, SC. However, the investigator moved from South Carolina to Long Beach VAMC in Sacramento, CA. The process microbiota analysis has started in Long Beach VAMC. We hope to complete the stool microbiota analysis by March 2024.

Key Research Accomplishments.....

- The manuscript on the “Effect of Probiotics on Irritable Bowel Syndrome with Gulf War illness” has been published.
Fed Pract. 2022 October;39(10):410-417 | 10.12788/fp.0322
- The poster on the “Effect of Probiotics on Serum Cytokines in Irritable Bowel Syndrome with Gulf War illness” was presented in the Am College of Gastroenterology meeting in October 2022.
- Stool microbiota analysis should complete before March 2024.

Reportable Outcomes.....

Nil.

Conclusion:

- This study has stopped enrolling.
- The key manuscript on the effect of probiotics on Irritable bowel syndrome with Gulf War illness has been published.
- The effect of Probiotics on Serum Cytokines in Irritable Bowel Syndrome with Gulf War illness was published as abstract and later presented as a poster. The manuscript is in preparation.
- Stool samples for microbiota are being analyzed to determine the effect of probiotics on gut microbiota in Veterans with irritable bowel syndrome with gulf war illness.

References.....

Nil.

Appendices.....

Nil.