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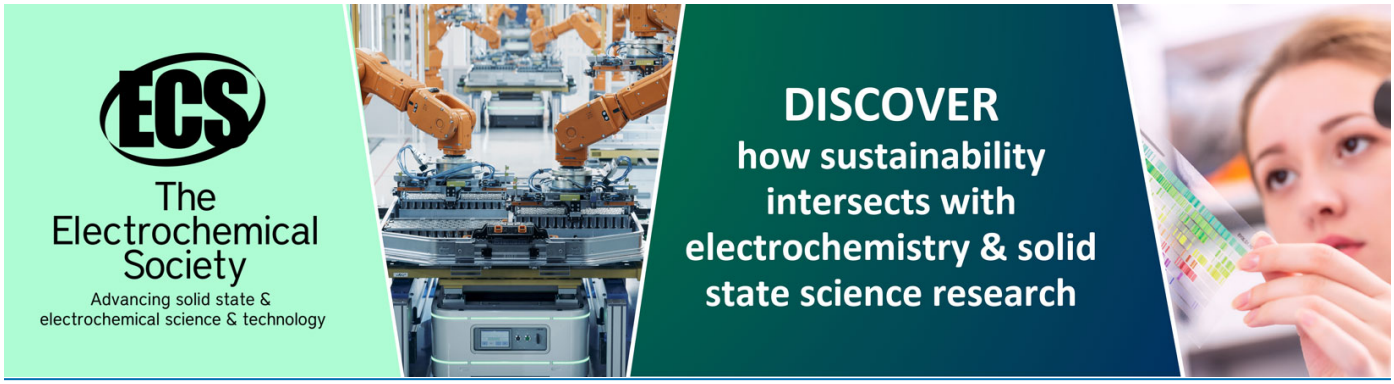

Impact of colon hydrotherapy on the cardiovascular risk of a group of young, overweight, adult Colombian females with hyperlipidemia

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Abstract: This poster presents a project that aims at collecting evidence that a colon hydrotherapy can reduce the cardiovascular risk (CVR) in a group of young overweight females with hyperlipidemia, probably through modulation of the intestinal microbiota.

Introduction: There seems to be a common pathway in the pathophysiology of most chronic diseases (CDs) [1]: bad life habits → disbiosys (gut microbiota imbalance) → gut mucus layer disruption → increased gut permeability → metainflammation → exacerbation of the gut nervous system → CD (Fig. 1), overweight in this case [2]. This condition, as part of the metabolic syndrome, poses a high CVR [3]. Changing risk habits for healthy ones is pivotal for treatment, but tackling dysbiosis also ought to play an important role. Some authors are trying fecal transplants, for instance, but we propose colon hydrotherapy (CH) instead.

Materials and methods: two groups, each of 12 overweight young females (18-28 y old) with hypercholesterolemia, will undergo a leaning program as recommended by [4], with the experimental group undergoing a 6-day colon hydrotherapy protocol. CVR will be estimated with the help of a bioimpedance Body Composition Analyzer and a Vital Signs Analyzer from SECA-Germany (mVSA 535 and mBCA 525, respectively, fig 3.). Additionally, intestinal microbiota composition will be analyzed by molecular methods (16S ribosomal RNA or 16S rRNA). Hypothesis: Both groups will decrease their CVR, but the experimental group will perform better, an outcome probably associated with re-establishment of gut microbiota imbalance (eubiosys) through the CH (Fig. 4).

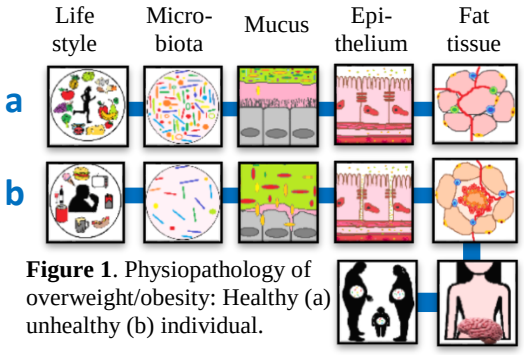

Figure 1. Physiopathology of overweight/obesity: Healthy (a) unhealthy (b) individual.

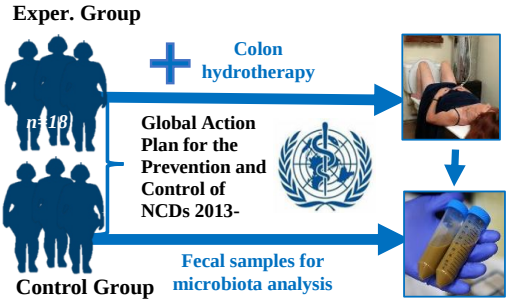

Figure 2. Experimental protocol.

Figure 3. Electrical Bioimpedance measurements.

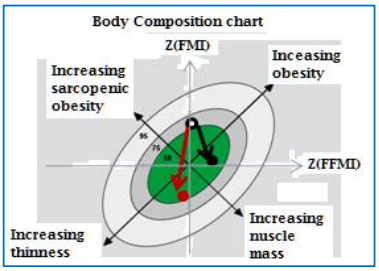

Figure 4. Results: it is expected that the experimental group (red lines) obtain a quicker, better and more lasting beneficial effect that the control group.

References

[1] Gonzalez-Correa C A et al. 2017 *Med. Hypotheses* **108** 133-43
[2] Seganfredo F B et al. 2017 *Obes. Rev*. **18** 832-51
[3] Van Rooy M J & Pretorius E 2014 *Curr. Med. Chem.* **1** 2121-9
[2] WHO 2013. Consulted on 19-04-19. Available at: http://www.who.int/nmh/events/ncd_action_plan/e