HERBAL DIETARY SUPPLEMENTS USED IN WEIGHT CONTROL AND DYSLIPIDEMIA: PRELIMINARY STUDY OF PHARMACIES DATA SALES

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Introduction: Overweight/obesity likewise dyslipidemia are global public health issues in growing prevalence. In Italy is difficult to estimate the amount of herbal dietary supplements (HDS) sold for dyslipidemia and weight control. Hence, the aim of this preliminary study was to provide an overview of their numbers and characteristics.

Materials and methods: Information of HDS sales monitoring have been collected from databases of pharmacies located in Rome, from October 2018. Only data related to HDS (with at least one botanical ingredient) indicated for weight control and dyslipidemia were included in this study. Each product has been analyzed for: composition, indication of use, standardization, etc. The activity claimed for each product was assessed by interfacing it with scientific literature data.

Results: To date, about 4600 dietary supplements were sold by two different pharmacies and more than 2500 of these consisted in herbal composition. Products used for weight control or dyslipidemia represent the 16% of the total HDS. The majority were multicomponent (2-13and 2-29ingredients for products used for dyslipidemia or overweight, respectively). So far, the number of HDS used for dyslipidemia (about 220) consist in 55different formulations, and 45different plants, including Oryza sativa fermented with Monascus purpureus, Berberis aristata, Saccharum officinarum, Olea europea, Camellia sinensis, Haematococcus pluvialis, Polygonum cuspidatum, etc. Overweight category counts about 210 products, consisting in 57different combinations and 107different plant extracts, including: *Curcuma longa*, Camellia sinensis, Betula alba, Garcinia cambogia, Hieracium pilosella, Piper nigrum, Ortosifon stamineus, Plantago ovata, Taraxacum officinale, Citrus aurantium, Gymnema sylvestre, Paullinia cupana, etc. Moreover, the standardization of plant-derived products is often lacking, even if doses are reported in the product labels.

Discussion and conclusions: People are prone on using HDS for dyslipidemia and overweight, without any awareness of their safety profile. From 5months of sales monitoring, it comes out that every fifteen-food supplements, sold a day in the pharmacy, nine are plant-derived; among them, two are for dyslipidemia and weight control. Intuitively, both categories appear as the most sold. The recurring presence of the same plants extracts in both categories (Camellia sinensis, etc.), and the different combinations, often cannot justify their clinical use. Some of the plants recommended in the Guidelines of the Italian Ministry of Health for their effects on the cholesterol or overweight (e.g., Trigonella foenum-graecum, or Ilex paraguariensis) are quite lacking in the market, while those actually found in the most sold HDS (Saccaharum officinarum, Malus pumila, Melilotus officinalis, Sylibum marianum, etc.) don't appear in the guidelines for the above effects. Obesity is a multifactorial pathology and the variety of plants used, could be probably explained by its multiple targets (carbohydrate and lipid metabolism, diuretic effect, intestinal absorption, etc.). However, the presence of numerous plant extracts could not be justified, as long as it has not been proven that adding them together could improve the final effect. This aspect concerns primarily dyslipidemia supplements that have a single target (lipids reduction). For the above-mentioned problems, monitoring whether reports of suspected adverse reactions have been received at the Italian Phytovigilance system during the study period, will be an important issue.