DEVELOPMENT OF CONTENT AND PHARMACOGNOSTIC ANALYSIS OF VENOTONIC HERBAL MIXTURES

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Introduction. According to medical statistics about 70% of adults have different pathologies of the venous system; 25% of these patients have clinical signs of chronic venous insufficiency. The main causes of chronic venous insufficiency are varicose veins and post-thrombotic syndrome that are being developed after deep vein thrombophlebitis. Venotonic effect of drugs is aimed to the elimination of venous stasis, they reduce capillary fragility, increase their elasticity; improve microcirculation and lymph flow.

Materials and methods. According to literature search of biologically active substances (BAS) and the pharmacological properties of medical raw herbal material with predictable venous activity have allowed us to make the herbal mixtures, which includes blueberry fruits, chokeberry fruits, strawberry flowers, echinacea roots, blackberry and mint leaves. While developing the content of our herbal mixtures we took into account the choice of the type of medical raw herbal material (MRHM), which smoothes or eliminates the side effects of synthetic drugs in complex therapy. BAS of herbal mixtures have different types of pharmacological activities: anthocyanins have antioxidant and anti-inflammatory action, flavonoids – antioxidant, membrane stabilizing, spasmolytic action; phenol carbonic and hydroxycinnamic acids – spasmolytic, choleretic, anti-microbial action; polysaccharides – immunostimulating action.

Results. As a result of qualitative reactions and chromatographic studies (TLC and HD), in alcohol and water extractions of herbal mixtures and after acid hydrolysis such BAS have been found: flavonoids glycosides and aglycones, tannins of condensed group, triterpenoids, polysaccharides, coumarins, ascorbic acid. Pharmacognostic analysis was conducted according to the requirements of 1.4 SPU. (Plantae medicinalis) and individual articles to the corresponding MRHM; moisture, common ash content and ash that is insoluble in 10% hydrochloric acid solution and the content of impurities were determinant. Macroscopic analysis of the herbal mixtures allowed us to determine the characteristic of external signs of herbal mixtures: the degree of grinding, the color, the smell, the taste of water decoction. Microscopic analysis of the herbal mixtures allowed establishing of basic diagnostic features, which correspond to each component of the MRHM herbal mixtures.

Conclusions. A multi-component venotonic herbal mixtures includes blueberry fruits, chokeberry fruits, strawberry flowers, purple coneflowers roots, blackberry and mint leaves; the methods of pharmacognostic analysis of herbal mixtures have been established.