Sakhatska I.M.

STUDY OF MEDICINAL PLANTS WITH SEDATIVE EFFECT

Department of Pharmaceutical Botany and Pharmacognosy
Bukovinian State Medical University

Stress, depression and constant nervous tension are among the main problems of modern society. As an additional aid to the nervous system recovery and returning it to normal condition, you can recommend phytotherapy. Medicinal plants will help to cope with difficult stressful situations, reduce nervous tension, overcome anxiety and insomnia. Despite the large range of plants that are recommended as sedatives, their study remains relevant.

The aim of the work was to study the chemical compounds of the raw material of peonies of medicinal species «Rosea plena» and «Alba plena» for expanding the raw material arsenal and their pharmacological properties. Qualitative reactions on different groups of biologically active substances were used to detect the active substances, and for quantitative analysis were used paper, thin-layer and gas chromatography.

One of the plants that is official, well-studied and has a sedative effect is the Paeonia anomala. Its rhizomes and roots contain salicin, methylsalicylate, organic acids and other substances. The aboveground part of the plant contains tannins, vitamin C, flavonoids, alkaloids, fatty acids and iridoids. However, this plant has a limited raw material base and is protected by law. Today, more than 300 species of woody and 10,000 species of herbaceous peonies are grown. Peony is used as a sedative, in addition, the underground organs in folk medicine are used as an analgesic, anti-inflammatory, antimicrobial agent. Therefore, it is advisable to conduct the phytochemical study of the most common ornamental species of peony, namely «Rosea plena» and «Alba plena».

In our paper the content of organic acids (including benzoic (5654.8 mg/kg), malic and citric), tannins, steroids, polyphenolic compounds (gallic acid), fatty acids, aminoacids, polysaccharides (starch) was studied and the presence of methyl salicylate (766.5 mg/kg), salicylaldehyde (1401.5 mg/kg) was revealed, flavonoids (rutin, quercetin, kaempferol) were identified and quantified in the leaf. In the ash of leaves and rhizomes with roots were also found 19 elements such as iron, silicon, phosphorus, aluminum, manganese, manganese, lead, nickel, molybdenum, calcium, copper, zinc, sodium, potassium, strontium.

Due to the expanded chemical study of additional compounds in rhizomes with roots, it is possible to predict a fairly pronounced antimicrobial activity of raw materials.

Shchudrova T.S.

PINEAL DYSFUNCTION AND KIDNEY RESISTANCE TO TOXIC DAMAGE

Department of Pharmacology
Bukovinian State Medical University»

Pineal gland is the main regulator of circadian rhythms, neuroendocrine functions, and ageing, while its hormone melatonin has multiple biological and pharmacological effects. According to Ahmadian (2016), Reiter (2017) and Tavakoli (2014), melatonin, due to its free-radical scavenging activity and ability to potentiate the antioxidant system is a highly important antioxidant. Several researchers (Bonnefont-Rousselot, 2010; Espino, 2018; Esrefoglu, 2017; Ničković, 2018; Reiter, 2017) reported a therapeutic effect of melatonin in various pathologies related to oxidative stress. Besides, numerous studies (Majidinia, 2017; Pacini, 2016; Reiter, 2018; Tordjman, 2017) report beneficial immunostimulatory, anti-inflammatory, anti-apoptotic, cytoprotective, oncostatic, and anti-aging effects of melatonin.

The aim of this research was to study the renoprotective potential of melatonin in conditions of aminoglycoside-induced AKI against the background of pineal hypo- and hyperfunction.

Nonlinear mature white rats (n=40) were randomly divided into 5 groups. Animals from the I (Control), and II (AKI) group were kept under the natural light regimen. Pineal hypofunction was simulated in rats from the III group by maintenance under conditions of constant light at 500 lux (24.00 light : 0.00 darkness) for 7 days. Pineal hyperfunction was simulated in rats from the IV