

A043 Study of anti-inflammatory effect of natural intranasal preparation for treatment of acute rhinitis

A.E. Alexandrova, A.N. Shikov, O.N. Pozharitskaya and V.G. Makarov
Interregional Center "Adaptogen", 47/5, Piskarevsky pr., 195067, St-Petersburg, Russia.

Search and development of effective and safe drugs for intranasal administration is one of leading problems of otorhinolaryngological practice in connection with a high expansion of diseases of a mucous membrane of nose and sinuses. Medicinal herbs are a potential source of biologically active compounds with high efficiency and minimal side effects. The oil extract of *Achillea millefolium* herb, *Salvia officinalis* leaves, *Hypericum perforatum* herb, *Ledum palustre* sprout was prepared with use of a rotapulsed extractor on original technology. The plants in the ratio of 2,5:2,25:1,75:1 mixed and the oil extract prepared with the mixture. Olive oil was used as extracting agent. Then oil extract admixed with thymol, dimethyl sulfoxide and peppermint oil.

Rat acute rhinitis was produced by intranasal introduction of 7,5% solution of formalin. Influence of preparation on acute rhinitis was estimated macroscopically and histologically methods. Histochemical pigmenting by Alcian blue was used for revealing acidic mucopolysaccharides, which production is increased in inflammation. The state of epithelium was estimated on: mucous hyperemias; hyperplasias and damages of epithelium; amounts of goblet cells and reaction of slime; forms, degree of inflammation.

The inflammations were macroscopically recorded from serous up to serous-hemorrhagic after 7 day. The administration of preparation resulted to the expressed medical effect. Thus the attributes of an inflammation were absent in 90 % cases. At study of cellular composition of an inflammatory infiltrate of the nontreated rats with acute inflammatory process we observed predominance of infiltration by mucous neutrocytes at less expressed lymphocytes, plasmocytes and macrophages. Also it was observed the dominated infiltration of macrophages and lymphocytes, that specifies activation of the local immune answer. Along-side with anti-inflammatory was marked local immunostimulating effect of preparation. The significant anti-inflammatory activity of the preparation can be explained by synergetic influence of biologically active compounds of plant components of oil extract.

A044 Study of antibacterial activity of chamomile oily extract to *Helicobacter pylori*

V.G. Makarov, A.N. Shikov, O.N. Pozharitskaya and A.S.Kvetnaya
Interregional Center "Adaptogen", 47/5, Piskarevsky pr., 195067, St-Petersburg, Russia.

Helicobacter pylori infection of the stomach is one of the commonest chronic infections world-wide. *H. pylori* is directly associated with peptic ulcer disease, chronic gastritis, etc. The aim of the work was a study of the antibacterial action of chamomile oily extract (COE) to *H. pylori*. COE was prepared using rotapulsed extraction of *Matricaria recutita* flowers by plant fixed oil on original technology [Pat. RU № 2141336]. Coumarin and flavonoid derivatives, poly-ynes, bisabolol oxides, chamazulene, derivatives of humulones, chlorophylls were found in COE. Soybean lecithin, alpha-tocopheryl acetate and ascorbyl palmitate were added to COE as antioxidants.

Methods: The cultivation of the test microorganism *H. pylori* was carried out on a Colombian agar with 10 % of ram's blood. Incubation of crops made at 37 degrees within 3-7 day in dry gas-generating packages. Influence of COE on viability and the biological properties of *H. pylori* were studied *in vitro* in Petri dishes on the Colombian agar with 10 % of ram's blood at contact action on cells of reference strain. As the control the plant fixed oil was used.

Results: Bactericidal action of COE on *H. pylori* was determined in dilution up to 1:8. At dilution of 1:8, 1:16, 1:32 propagation of separate colonies *H. pylori* was found. The cultures, discharged of an operative range of COE as against stock cultures of reference strain grew as small (diameter up to 0.5 mm), dull, flat with rough edges without hemolysis of colonies. The viability of the changed cultures of reference strain was 1-2 generations. COE inhibited production of a urease at *H. pylori*. Comparative estimation of biological properties *H. pylori*, evolved in control crops and in place of COE action testified to influence COE on morphological and fermentative property of the microorganism. It is possible to suppose, that the mechanism of the therapeutic action of COE is based on inhibition of colony activity of *H. pylori* and inhibiting effect on adhesion of this microorganism of phospholipid - lecithin. Thus, COE is promising for application in complex therapy of stomach ulcer and duodenal intestine, especially at the patients with allergic responses on antibacterial drugs, and also in case of a resistance of the inducer to antibiotics.

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