

Antiinflammatory and Wound Healing Activity of Sedum Essential Oils Growing in Kazakhstan

Authors : Dmitriy Yu. Korulkin, Raissa A. Muzychkina

Abstract : The last decade the growth of severe and disseminated forms of inflammatory diseases is observed in Kazakhstan, in particular, septic shock, which progresses on 3-15% of patients with infectious complications of postnatal period. In terms of the rate of occurrence septic shock takes third place after hemorrhagic and cardiovascular shock, in terms of lethality it takes first place. The structure of obstetric sepsis has significantly changed. Currently the first place is taken by postabortive sepsis (40%) that is connected with usage of imperfect methods of artificial termination of pregnancy in late periods (intraamniotic injection of sodium chloride, glucose). The second place is taken by postnatal sepsis (32%); the last place is taken by septic complications of caesarean section (28%). In this connection, search for and assessment of effectiveness of new medicines for treatment of postoperative infectious complications, having biostimulating effect and speeding up regeneration processes, is very promising and topical. Essential oil was obtained by the method hydrodistillation air-dry aerial part of Sedum L. plants using Clevenger apparatus. Pilot batch of plant medicinal product based on Sedum essential oils was produced by Chimpharm JSC, Santo Member of Polpharma Group (Kazakhstan). During clinical test of the plant medicinal product based on Sedum L. essential oils 37 female patients at the age from 35 to 57 with clinical signs of complicated postoperative processes and 12 new mothers with clinical signs of inflammatory process on sutures on anterior abdominal wall after caesarean section and partial disruption of surgical suture line on perineum were examined. Medicine usage methods - surgical wound treatment 2 times a day, treatment with other medicines of local action was not performed. Before and after treatment general clinical test, determination of immune status, bacterioscopic test of wound fluid was performed to all women, medical history data was taken into account, wound cleansing and healing time, full granulations, side effects and complications, satisfaction with the used medicine was assessed. On female patients with inflammatory infiltration and partial disruption of surgical suture line anesthetic wound healing effect of plant medicinal product based on Sedum L. essential oils was observed as early as on the second day after beginning of using it, wound cleansing took place, as a rule, within the first row days. Hyperemia in the area of suture line also was not observed for 2-3-d day of usage of medicine, good constant course was observed. The absence of clinical effect on this group of patients was not registered. The represented data give evidence of that clinical effect was accompanied with normalization of changed laboratory findings. No allergic responses or side effects were observed during usage of the plant medicinal products based on Sedum L. essential oils.

Keywords : antiinflammatory, bioactive substances, essential oils, isolation, sedum L., wound healing

Conference Title : ICLSBE 2015 : International Conference on Life Science and Biological Engineering

Conference Location : Prague, Czechia

Conference Dates : July 09-10, 2015