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POMEGRANATE FRUITS IN THE PREVENTION AND TREATMENT OF KIDNEY DISEASES

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To date, a huge experience has been accumulated in the use of pomegranate fruits and bark in folk medicine. One of the favorite plasters used by Avicenna was a composition made according to the recipe: they take dry rose petals, wet pomegranate crusts, lentils — five dirhams each, pour one liter of water on them, boil well, filter, rub, knead with rose oil and apply to the sore eye [1,3,5,7,9,11].

Pomegranate, due to its rich chemical composition, has a beneficial effect on all body systems. All parts of the plant, especially the peel, have the property of inhibiting aldose reductase and alpha glucosidase, enzymes that play an important role in the development of complications in diabetes mellitus [2,4,6,8,10,12,14,16].

Pomegranate extracts inhibit glucose transporters in the intestine, thereby reducing its absorption, has a hypoglycemic effect. Alcoholic extracts of pomegranate leaves and flowers have pronounced antidiabetic activity [17,19,20].

Pomegranate juice has a hypotensive effect, inhibits angiotensin converting enzyme in patients with diseases of the cardiovascular system and kidneys. Pomegranate juice has antithrombotic properties, has a cardioprotective effect, protects cardiomyocytes from ischemic damage, improves the condition of patients with coronary heart disease. The juice also reduces damage to the intima of the blood vessels of the heart and kidneys [1,13,15,18].

Among the oils obtained in the laboratory, pomegranate seeds contained the highest proportion of pomegranate acid. Among the acids, pomegranate acid had the highest proportion, and linolenic acid had the lowest. These results are important for the identification of pomegranate seed oils. Among the commercial samples tested using the current approach, only one of them showed the same content analysis as in the oils obtained in the laboratory.

The purpose of the study: To study the morphometric parameters of the thymus and spleen in renal insufficiency and ways of correction with pomegranate seed oil.

Research material. In this experiment, sixteen young female Wistar Albino rats weighing approximately 300 to 320 g were randomly divided into 2 groups: experimental (a group that received oil from pomegranate seeds) and control. Six different wounds at a distance of 1 cm from the midline and from each other were formed using a 6 mm biopsy instrument. Three wounds were left open (a group of open wounds), while 3 wounds were sewn up with vicryl 4/0 (a group of closed wounds). Treatment with pomegranate seed oil was carried out locally in the





treatment group, both on open and closed wounds, once a day for 14 days. The healing parameters were evaluated. Histopathological examination was performed to study inflammation, neovascularization, granulation and fibroblast formation in addition to serological (enzyme immunoassay) evaluation of rat malondialchemist, rat glutathione peroxidase and rat superoxide dismutase. PeriScan PIM 3 System Laser Doppler Blood Perfusion Imager was used to calculate blood perfusion. On day 14, a statistically significant difference was observed in open wounds between the levels of inflammation and neovascularization and the type of group ($P < 0.05$). On day 21, the level of granulation tissue in the closed wound group was higher in the garnet group ($P = 0.000$). for the treatment of excised wounds in rats and may be suitable for the clinical treatment of humans, but large controlled studies are needed. The developed approach is applied to pomegranate seed oils prepared in the laboratory and tested on commercial samples. Among the oils obtained in the laboratory, pomegranate seeds of the Yeni Hicaz variety contained the highest proportion of pomegranate acid. Among the acids, pomegranate acid had the highest proportion, and linolenic acid had the lowest. These results are important for the identification of pomegranate seed oils. Among the commercial samples tested using the current approach, only one of them showed the same content analysis as in the oils obtained in the laboratory. Based on the analysis of literature data and the results of studies of pomegranate juices of industrial production carried out by the RSPS, the nutritional profile of pomegranate juice is presented, where the content of more than 30 food and biologically active substances is given. The most significant from the point of view of providing a person with micronutrients and minor biologically active substances for pomegranate juice are polyphenolic compounds – flavonoids, phenolic acids and ellagotannins, as well as minerals – potassium, magnesium and copper. A serving (200-250 cm³) of pomegranate juice contains an average of 10% of a person's daily need for flavonoids and phenolic acids (an adequate level of daily consumption. The content of potassium in a serving is on average 15% of the daily requirement, copper – 10%, magnesium – 5%. To do this, carbamylated darbepoetin at a dose of 50 mcg / kg subcutaneously is injected into the withers area to white laboratory rats 24 hours before modeling kidney pathology by applying atraumatic clamps on the renal legs for 40 minutes, followed by reperfusion of blood flow in the kidneys. The introduction of this drug at an experimentally determined time in the declared dose provides effective prevention of ischemic reperfusion disorders of the kidneys. Thus, the practical significance of this study lies in the fact that the basic principles of the formation and development of morphometric parameters of the spleen and thymus in renal insufficiency have been determined, which makes it possible to correctly develop preventive measures.





ЛИТЕРАТУРА:

1. Абу али Ибн Сина «Авиценна». Канон врачебной науки. Книга V.
2. Choi J.G., Kang O.H., Lee Y.S., Chae H.S., Oh Y.C., Brice O.O. et al. *In vitro* and *in vivo* antibacterial activity of *Punica granatum* peel ethanol extract against salmonella // Evid Based Complement Alternat Med. 2011;2011:690518.
3. Sánchez-Lamar A., Fonseca G., Fuentes J.L., Cozzi R., Cundari E., Fiore M. et al. Assessment of the genotoxic risk of *Punica granatum* L. (Punicaceae) whole fruit extracts // J Ethnopharmacol. 2008;115:416—22.
4. Shema-Didi L., Sela S., Ore L., Shapiro G., Geron R., Moshe G., et al. One year of pomegranate juice intake decreases oxidative stress, inflammation, and incidence of infections in hemodialysis patients: A randomized placebo-controlled trial // Free Radic Biol Med. 2012;53:297—304.
5. Khamdamova M. T. Echographic features of the range of variability in the size of the uterus and ovaries in women of menopausal age using oral and injectable forms of contraception // American Journal of Medicine and Medical Sciences. - 2020. - N10 (8). - P.580-583.
6. Khamdamova M. T. Echographic features variability in the size and shape of the uterus and ovaries in women of the second period of adulthood using various contraceptives // Asian Journal of Multidimensional Research - 2020. - N9 (5). - P.259-263.
7. Khamdamova M. T. Somatometric characteristics of women of the first and second period of adulthood using different contraceptives with different body types // The American Journal of Medical Sciences and Pharmaceutical Research - 2020. - N8 (2). - P.69-76.
8. Khamdamova M. T. Age and individual variability of the shape and size of the uterus according to morphological and ultrasound studies // Problems of biology and medicine. 2020, №1 (116). - P.283-286.
9. Khamdamova M. T. Ageechographic characteristics of the uterus and ovaries in women of the first and second period of middle age // Biology and integrative medicine. ISSN 2181-8827 2020. №2 - March-April (42). - P.75-86.
10. Khamdamova M. T. Anthropometric characteristics of the physical status of women in the first and second period of middle age // New day in medicine. 2020. - № 1 (29). - P.98-100.
11. Khamdamova M. T. Ageechographic characteristics of the uterus and ovaries in women of the first and second period of middle age // Biology and integrative medicine. - Bukhara. 2020. №2 (42) - P.75-86.
12. Khamdamova M. T., Barotova M.M. Modern concepts on the etiopathogenesis of background and precancer diseases of the cervix // ScienceAsia 48 (2022): 31-38 doi: 10.2306/scienceasia1488-1295.2022.SE009





13. Khamdamova M. T., Rabiev S. N. Anatomical and clinical correlations of fetal development assessment in women with different body types and height // ScienceAsia 48 (2022): 23-29 doi: 10.2306/ scienceasia1488-1295.2022.SE008.

14. Khamdamova M. T., Barotova M.M. Modern concepts about diseases of the cervix // Биология и интегративная медицина. ISSN 2181-8827 2022. №1 январь-февраль (54).С.70-77.

15. Khamdamova M. T., Urinova Sh.A. Innovative method of teaching students of the department of gynecology // Тиббиётда янги кун. Бухара. 2022 №2 (40), март-апрель, Б.432-435.

16. Khamdamova M. T., Rabiev S. N. Somatometric characteristics of pregnant women with different body types // Europe's Journal of Psychology, 2021, Vol. 17(3), P.215-220.

17. Khamdamova M. T., Barotova M.M. Clinical aspects of the use of laser photodynamic therapy in cervical pathology // American Journal of Medicine and Medical Sciences 2021, 11(4): 353-355 DOI: 10.5923/j.ajmms.20211104.19

18. Khamdamova M. T., Barotova M.M. Laser photodynamic therapy in the treatment of cervical pathology // Academicia: An International Multidisciplinary Research Journal <https://saarj.com>.ISSN: 2249-7137 Vol. 11, Issue 3, March 2021.

19. Khamdamova M. T., Rabiev S. N. Features of the course of pregnancy in women of different somatotypes // Academicia: An International Multidisciplinary Research Journal <https://saarj.com>.ISSN: 2249-7137 Vol. 11, Issue 3, March 2021.

20. Khamdamova M. T., Akhmedov F.Kh. A study of ultrasound examination in the prevention of complications of operations on the biliary tract // Asian Journal of Multidimensional Research (AJMR) <https://www.tarj.in>. ISSN: 2278-4853 Vol 10, Issue 9, September, 2021 Impact Factor: SJIF 2021 = 7.699.P.212-214.

