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ARTICLE REVIEW: MYRTUS COMMUNIS LINN AND ITS MEDICAL AND BIOLOGICAL US

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ABSTRACT:

We can define the Linn communal Myrtus. (Family: Myrtaceae) is one of the most effective medicines plant in the world wild. It is called Aas and its fruit berries are called Habb-ulAas. It have grown for its attractive leaf, flowers and fruits. Often used in a number of conditions as treatment of gastric ulcers, diarrhea, dysentery, vomiting, rheumatism, hemorrhage, deep sinuses, leucorrhoea and cosmetics, including hair loss. The blades, berries and branches are used for the flavoring of food and wine. Mature fruits in the past were used as a food integrator because of the high level of vitamins. The plant produces numerous biologically active substances, such as tannins, flavonoids, coumarins, essentials oil, strong oil, fibres, carbohydrates, citric acid, malic acid and antioxidants. This contribution includes an overview of its ethno-medical applications, chemical components and the pharmaceutical profile as a medicinal plant.

KEYWORDS: Myrtus communis Linn; Antiulcer activity; Antimicrobial activity. Flavor food.

INTRODUCTION:

Myrtus communis L Is an fragrant plant formed by a frequent immortal shrub or a minor tree of the Myrtaceans family comprising 130–140 genera and around three hundred–fifty–four thousand species in temperate, hot, and subtropical areas[1–5]. Myrtus communis is spread throughout the Mediterranean and Southern Europe regions. It is present in the wild in Africa, Europe and Asia, including Turkey, Iraq, Iran and Syrian countries[6-10]. Mystery of communism L. It is a continuously green aromatic plant that is grown in Iraq in the wild and in gardens[11].The plant is 1.8 to 2.4 m long and has small green leaves. Its twigs form a full pate soon, enclosed with thick, evergreen plants. The flowers are medium-sized, white, fragrant and give fruit that is initially green in the shape of an oval at maturity turning into a greenish black or white color in the form of kidneys and they are sweet fruits with a pea size estimated at 1.2 - 0.7 cm as shown in figure (1) [12].

Figure (1): fruit and branches of Myrtus communis

Taxonomy:

Kingdom Plantae – Plants
Subkingdom: Tracheobionta – Vascular plants
Superdivision Spermatophyta – Seed plants
Division Magnoliophyta – Flowering plants
Class Magnoliopsida – Dicotyledons
Subclass Rosidae
Order Myrtales

Family Myrtaceae – Myrtle family
Genus Myrtus L. – myrtus
Species Myrtus communis L.

THE COMPONENTS OF THE PLANT AND ITS USES:

The plant covers Essential oil, some oily acids and fixed oils, as well as resinous materials with a ratio of 6 (-8%) containing jalapin (complexes of clucoside acids) and ipuganol (feto-sterol-glucoside) dissolved in the petroleum and ipuraral (Saito) Syto sterol glucoside is dissolved in alcohol. It was also found that the roots and tubers of this plant contain Convolvulin (C31H50O16) and this substance is toxic to sheep. The plant is dehydrated, diuretic, and expectorant, and it is believed that this is due to the presence of Saponin [14-13]. The chemical compounds, dodecanoate , hexa decanoats, octate canoat and hepta decane isolated from the long-term plant have been shown to be toxic against the red casting beetle insect T. castaneum. The plant also contains fibers, sugars, antioxidants, and many effective biological compounds, including phenols and flavonoids [15].

PHARMACOLOGICAL ACTIVITIES:

Antimicrobial activity:

Myrtus communis derives antimicrobial activity against Escherichia coli, Staphylococcus aureus, Pseudomonas aeruginosa, Klebsiella aerogenes, Salmonella typhi and S. Alem et al. described shigiella [16]. The antibacterial activity of M methanol extract has been assessed by Mansouri et al.[17]. Communis of 10 laboratory strains with 6 positive gram stain strains (Staphylococcus aureus, Micrococcus luteus, Streptococcus pneumoniae, and Listeria) and 4 strains of negative bacterium with gram stain (Escherichia coli, Proteus vulgaris, Pseudomonas aeruginosa and Campylobacter jejuni).

Akin et al. [18] referred to the anti-bacterial activity of Myrtus communis plant extracts against seven pathogenic bacterial species that included (Staphylococcus aureus, Listeria monocytogenes, and Bacillus subtilis). Thus, the researcher assured that the Myrtus communis extracts were effective against the positive and negative bacteria of gram stain.

Antiulcer activity:

A analysis was carried out to check the protective effect of dried acacia fruits in the Wistar rats on ethanol and indomethacin ulcers. Until exposure to ulcers, two aqueous extracts and methanol extracts orally administered to animals were hired. Ulcer index, digestive juice volumes, intestinal acidity, entire acidity, gastropathologic saliva and histopathology tests were criteria for assessment of the anti-ulcer activity. The defense against ulcer was shown in aqueous and alcoholic extracts [19].

Antifungal activity:

The vital oils of the base plant showed an inhibitory effect of up to 60% for the R. Solani fungus at an amount of 1640 ppm in vitro. The inhibitory effect of essential oils of the base plant against Aspergillus fungus was studied in a gumbo micro dilution technique, and the researcher found an actual effect alongside all types of Aspergillus fungus [20].

Hepatoprotective properties:

The aqueous excerpt of M. Communis plants was examined to protect the liver from the toxicity induced in the liver of albino rats by paracetamol. The degree of defense of the liver with M aqueous extract. A variety of chemical limitations such as glutamate-pyruvate transaminase and glutamate oxaloacetate-transaminase and alkaline-phosphatase, the total protein and blood bilirubin levels have been studied in contact leaves (both total and

direct). The protective effect of the liver was at a dosage of 200 mg / kg and 400 mg / kg of body weight orally, as the extract showed with these concentrations a significant decrease in enzymes [21].

Antidiabetic effects:

The anti-diabetic effect of M. communis leaves was recorded in mice with diabetes induced by streptozotocin. Recently, it was found that the phenolic compounds of the ace plant were responsible for this activity. The phenols extracted after the greeneries of M. Communis showed an anti-diabetic effect [22]. No satisfactory results were available on the efficacy of M. Communis in diabetic rats. The results also revealed that ace plant phenols have a noticeable anti-diabetic effect when given 800 mg / kg body weight and a moderate response as an anti-diabetic at a concentration of 400 mg / kg in rats without diabetes as evidenced by recovering vagaries in the cells of the pancreas island. The study also revealed that phenolic compounds alone do not show any toxic effects on body tissues, as the study indicated the absence of tissue changes in the liver and kidneys in control mice without diabetes [22].

Anti-inflammatory:

Myrtucommulone compounds (MC), present in M. Communist leaves inhibit eicosanoid biosynthesis by direct and external shyness of cyclooxygenase-1 and 5-lipoxygenase enzymes. The ability of these compounds to exemplary inhibition has led to the suggestion in therapeutic use of treating inflammatory and allergic diseases [23].

Antioxidant activates:

Efficacy as an antioxidant for M. Communis fruit cuttings is resolute using 2,2-diphenyl-1-picrylhydrazyl (DPPH) and β-carotene-linoleic acid checks. Methanol extracts showed high levels of potency as free radical scavenging [24]. In another study, efficacy as an antioxidant for methanol, ethanol and water extracts for both leaves and fruits was measured. Efficacy as an antioxide was tested through the calculation of extract capacity to remove essential 2,20-azinobis (3-ethylbenzothiazoline-6-sulphonic acid). Both extracts demonstrated their antioxidant potential [25]. Flavonoids and anthocyanins in raspberry fruit extract, their efficacy as an antioxidant was examined by TEAC assay and free radical activity [26].

Insecticidal activity:

Efficacy as pesticides for essential M oils. Communis leaves and flowers have been described and found to be toxic and fatal in mosquito larvae Culex pipiens molestus Fourskal[27]. The nature of the oil showed an activities of insecticide against three insects stored, adults Ephestia kuehniella Zeller, Plodia interpunctella Hubner, and Acanthoscelides getectus Say bean [28]. Essential oils were shown to be successful as a Pedicus humanis capitis insecticide when tested using the small atmosphere and distemper process. The effectiveness may be attributed to the company of lineol, α-pinene, and linalol[29] as an insecticide.

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