

Scientific Studies on Achillea Millefolium

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Abstract

The anti-obesity agent, semaglutide (2.4 mg/week) was evaluated in a large (n=17,604) multinational randomized trial called SELECT to examine its effects on cardiovascular (CV) outcomes in obese patients with overweight with preexisting CV disease and no diabetes. The primary outcome was a composite of CV death, nonfatal myocardial infarction (MI), and nonfatal stroke. Over a mean duration of follow-up of 39.8 months, a primary CV outcome occurred in 6.5% in the semaglutide group and 8.0% in the placebo group; hazard ratio (HR) 0.80 (95% CI, 0.72 to 0.90; P<0.001). Mean change in body weight over 104 weeks was -9.4% and -0.9% with semaglutide and placebo, respectively; estimated treatment difference (ETT) -8.5% (95% CI, -8.5 to -8.3). There was significant amelioration in blood pressure and plasma levels of lipids, glycated hemoglobin, and C- reactive protein (CRP). The incidence diabetes and prediabetes were reduced by 73% and 67%, respectively with semaglutide. 16.6% of patients discontinued semaglutide due to adverse effects, mainly gastrointestinal (GI) compared with 8.2% who discontinued placebo. In conclusion, semaglutide is the first anti-obesity agent shown to decrease CV events in obese subjects with CV disease without diabetes. Further studies are needed to examine the impact of semaglutide on CV events in obese subjects without underlying CV disease.

Keywords: obesity, mortality; cardiovascular; semaglutide; select trial

Introduction

Attributes to the flowers and aerial parts of *Achillea millefolium* L. (Asteraceae), commonly known as Yarrow (*Zea maize*). The plant is monoecious, 1-3 meters high, and sturdy with a solid stem covered in alternate, over 4 cm wide linear leaves. Indigenous to Central America, but widely cultivated elsewhere. Widespread in temperate regions in meadows and along verges; native to Europe and western Asia; found in all types of soils except poor ones.

The male flowers from terminal racemes of spikes with 2-flowered husks. The female flowers are axillary. The spikes are at varying distances from the ground and are enclosed in a number of thin leaves, the sheath-like maize husk. The spikes consist of a cylindrical substance, the cob, on which the seeds are arranged in 8 rows of 40 or more. Single whitish-green threads of a silky appearance grow from the eye of the seeds and hang outside the husk where they catch the pollen. The maize seeds are usually yellow and can be darker to almost black. Style and stigma are the plant material of interest.

The plant has a long history as a wound healer, hence its botanical name. Generally used in skin cleansers; medically it is the best-known herbal remedy for fevers; good for all kinds of bleeding; used combined with other herbs to treat colds and flu; useful for weak digestion and colic, helps hay fever, lowers high blood pressure, improves venous circulation and tones varicose veins; used as snuff instead of tobacco. In China it is used fresh as a wound healer; and the whole plant is prescribed for

stomach ulcers, amenorrhoea, and abscesses.

Pharmacognosy & Phytochemistry:

General Appearance: NA Organoleptic Properties: NA
NA Microscopic characteristics: NA Powdered plant material: NA

Physico Chemical Constants:

Foreign organic matter:	NMT 2%	Total ash:	NMT 10%
Acid insoluble ash:	NMT 2.5%	Water soluble	NMT 15%
extractive:	NMT 15%	Alcohol soluble	NA
extractive:	NA		
Loss on drying:	NMT 10%		
Swelling index:	NA		
Pesticide residues:	NA		
Heavy metals:	NA		
Radioactive residues:	NA		
Other purity tests:	NA		

Acetylbalchanolide, 8-acetylgelelolide, achillicin, achimilic acid, anacyalin, 8-angelogelegelolide, betonicine; 2,4,6,8-Decateftraenoic acid dehydropiperidide; 2,4,6-Decatrienoic acid dehydropiperidide; (2E, 4E, 6Z)-Form. 1,2, -Epoxy-5-hydroxy-10(14)-germacren-12,6-olide; (1 α , 4 α , 5 β , 6 α , 11 β H,) Form. Homostachydrine, (s) Form. Isoachifolidiene; N-Isobutyl-2, 4,8- decatrienamamide; N-(2-Methylpropyl)-2,4,12-tetradecatriene-8,10-diyanamamide; Millefin; aparliiyotin; 2,4-undecadiene-8,10-diyanoic acid 2,3-dehydropiperidide; 2,4-undecadiene-8,10- diynoic acid isobutyl amide. Essential oil. HCN-glucoside achillien; 0.2 to more than 1% essential oil. May contain up to 50% chamazulene; In azulen free oil: camphor (18%), sabinene (12%), 1,8- cineole (10%), \square -pinene (9%); isoartemisiaketone (9%); azulene-containing oil: chamazulene (25%), \square -pinene (23%), caryophyllene (10%). \square -pinene (5%). Achillicin (=8-acetoxyartabsin) as one of pro-azulenes. The guaianolides 2,3-dehydrodesacetoxy- and desacetylmatricin and leukodin; the 3-oxaguaianolides, 8-acetyl- and 8-angeloygelelolide, the germacranolides. Milletin, balchanolide acetate, dihydro-parthenolide. Cis- and trans-matricaria ester. Flavonoids: apigenin and luteolin and 7-0-glucosides and glycosylfavones, especially, swertisin, vicenin-2 and – 3, schaftoside and isoschaftoside. Phenolic acid. Triterpenes and sterols-N-containing compounds: achillien c=betonicin), stachydrine, choline, glycine betaine, and the cyanogenic glycoside prunasin. 0.35% coumarins; 3-4% tannins.

Pharmacology:

Key actions are the loss of appetite, dyspeptic condition, liver and gall bladder complaints.

Experimental pharmacology:

Yarrow is chalogogue, antibacterial astringent, and antispasmodic [3]. It is a carminative, diaphoretic, bitter tonic, emmenagogue, antispasmodic, antiseptic, expectorant, anthelmintic stomachic, astringent, and hemostatic. Yarrow is used for the loss of appetite and depeptic ailments such as mild spastic discomforts of the GIT including inflammation, diarrhea, bloating and cramps [3].

Clinical pharmacology: Boil in water, it is used for the treatment of cold. Mixed with chamomile, it is used as a good hair tonic. In the form of an ointment, it is used for the treatment of hemorrhoids (Andrew Chevallier). Chamazulene, present in some volatile, is markedly anti-inflammatory and anti-allergic (Bisset, N.G).

Adverse reactions: May cause allergic reactions in rare cases. The use of essential oil is under professional supervision.

Contraindications: It includes an allergy to yarrow and other composites. The drug possesses weak to medium to severe potential for sensitization (PDR for Herbal Medicines). It is contraindicated during pregnancy (Robert Tisserand).

Warnings: Different chemotypes are commercially available, and most are safe, but the camphor chemotype is best avoided orally during fever and pregnancy and should be used with caution by people with epilepsy [4]. Neurotoxic –assumed from camphor content [4].

Precautions: No health hazards or side effects are known [3].

Dosage forms: Paste and decoction

Posology: Externally it is used for cramp-like conditions, liver disorders, and healing of wounds

(3). Daily doses 4.5 g yarrow herb or 5 g yarrow flower.

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