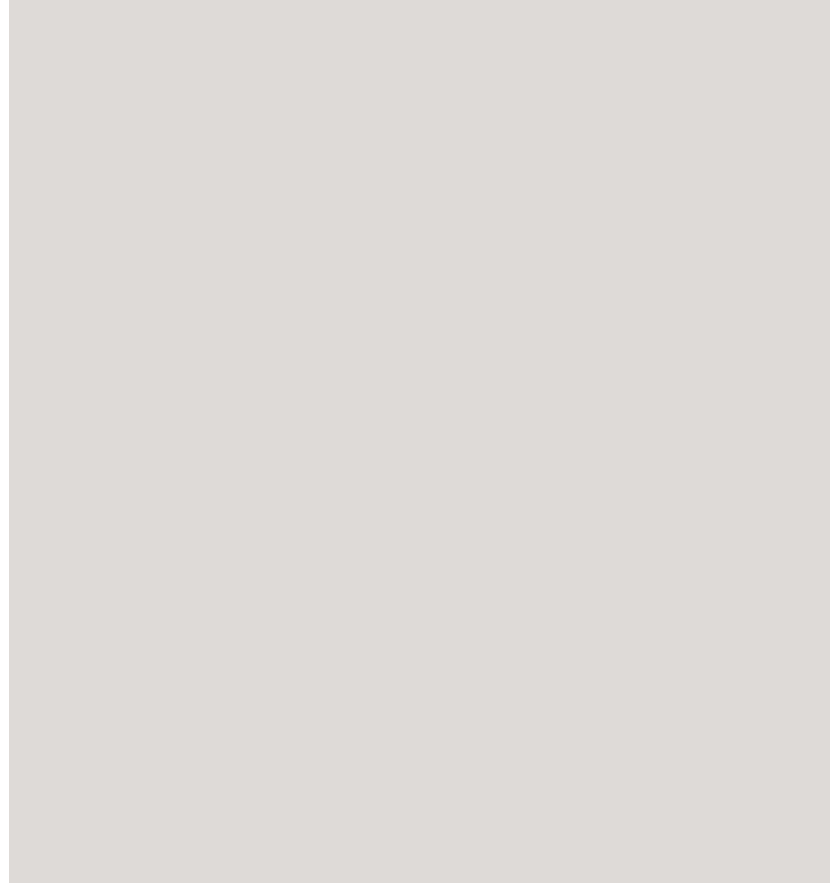


DIURETIC TEAS

Serkan ÖZBİLGİN Ph. D.

Ankara University Faculty of Pharmacy
Department of Pharmacognosy



Introduction

The kidneys are the principal functional units of the renal system. The kidneys regulate the volume of extracellular fluid, the concentration of extracellular electrolytes, pH of the body fluids and the blood pressure.

The effect of herbal medicines on renal disorders is for the most part limited to facilitating diuresis, preventing or treating urinary tract infections or treatment of urinary stones.

Introduction

DIURETICS

Diuretics increase renal excretion of sodium (Na) and water. The effect of most diuretics is to reduce the reabsorption of Na, with increased water loss being a secondary effect.

Many synthetic diuretics are available. They show a different mode of action but the clinical indications are basically the same and include acute renal failure (they are administered to increase urine production), hypertension and edematous states.

Diuretic teas

Indications:

Disuria (inability to urinate) and oliguria (decreased urine),

heart diseases

ascites (fluid collection in the abdomen)

enuresis (incontinence)

hematuria

arthritis and skin diseases

Contraindications:

renal failure

diabetes

Herbal Diuretics

- Several botanical drugs containing flavonoids, saponins and/or volatile oils are able to increase the volume of urine without retarding the resorption of Na and Cl.
- There is a lack of clinical studies dealing with the diuretic activity of herbal products. Examples in the literature of plants with direct diuretic effects producing consistent activity in controlled conditions are rare.
- Plant remedies are usually used as a tea.

Diuretic teas

Plants of this type accelerate blood circulation or act on the kidneys to produce a diuretic effect.

Edema evacuating plants act in this way.

Edema evacuating plants contain;

flavonoids,

phenols,

volatile oils,

sugars,

salts.

Diuretic teas

Caffeine-containing plants

Camelia sinensis, Tea (Çay)

- Caffeine is especially more in fresh leaves.
- In addition to caffeine, tannin also has a diuretic effect.
- Caffeine also dilates veins in the extremities.
- Caffeine has kidney stimulating effects.

Ilex paraguariensis, Mate (Mate)

-It doesn't grow in Turkey. It is a 20m tall tree. The leaves are used as tea and contain 1% caffeine. This rate can increase to 2% in young leaves.

Diuretic teas

Salt-containing plants

Cynara scolymus, Artichoke (Enginar)

- Leaves have diuretic effects.
- Flavonoids, chlorogenic acid, malic acid, succinic acid and their potassium salts are responsible for the activity.

Spirea ulmaria / *Filipendula ulmaria*, Meadowsweet (Keçi sakalı)

- Increases urine volume and accelerates the excretion of Sodium (Na).
 - Mineral salts are responsible for the effect.
- Meadowsweet's diuretic properties combined with its well-known anti-inflammatory effects make it a superior remedy in the treatment of arthritis when compared with aspirin, relieving not only the pain but facilitating the elimination of wastes through the kidneys.

Diuretic teas

Salt-containing plants

Sambucus nigra, Elder/black elder (Mürver)

- Flowers, fruits and shells have a diuretic effect.
- It contains KNO_3 , flavonoids and phenolic acids also have a diuretic effect.
- It is prepared as a decoction.
- Infusion is not suitable because of cyanogenetic heterosides.

Equisetum arvense, Horsetail (At kuyruğu)

- Drug consists of the aerial dried part of the plant which grows wild in Europe.
- Horsetail contains flavonoids, sterols, ascorbic acid, phenolic acids, minerals, alkaloids and saponins.
- Traditional medicine has long considered horsetail as a diuretic remedy.
- It is effective due to its salts and flavonoids.

Diuretic teas

Sugar-containing plants

Agropyrum repens, Couch grass (Ayrik otu)

- Drug is the rhizome of the plant.
- It contains up to 10% carbohydrates (fructose, glucose), flavonoids, saponins and minerals.
- The presence of sugar may account for a gentle diuretic effect throughout an osmotic mechanism.
- It is traditionally used to facilitate the renal elimination of water and as an adjunct in weight loss diets.

Cichorium intibus, Blue daisy (Hindiba)

- Roots (rhizoma) contain 56-60% inuline and roots are also used as a tea.
- Has a choloretic effect
(effect on bile release from the liver)

Diuretic teas Flavonoid-containing plants

Taraxacum dens leonis, lion tooth (aslan dişi)

Roots are used as a decoction, leaves are used as a infusion for chloretic effect.

(Infusion - herbs are steeped in hot water, similar to tea)

(Decoction - the plant is soaked then boiled in water,
extracts more of the plants ingredients)

Tilia platyphyllos, Linden (Ihlamur)

Flowers contain quercetin, and kaempferol derivatives.

Ribes nigrum, Black currant (frenk üzümü)

Contains rutoside and isoquercitrin.

Diuretic teas

Flavonoid-containing plants

Prunus cerasus, Sour cherry (vişne)

The fruit stalk carries flavonoids.

Anethum graveolens, Dill (Dere otu)

Fruits carry diuretic apiol (also in parsley)

Betula alba, White Birch Tree (huş ağacı)

The leaves are found to be diuretic because of the hyperoside and quercetin content.

Calluna vulgaris, Common heather, Ling (süpürge otu)

Arbutoside and flavonoids on the ends of the branches are effective diuretic.

Solidago virga aurea, Goldenrod (Altın başak)

It carries saponosides, flavonoids and phenolic acids. It evacuates edema out.

Hamamelis virginiana, Witch Hazel (Cadı findığı)

Carries picnogenol oligomers and flavonoids.

Viburnum prunifolium, Black Haw (Kartopu)

Shell and fruits are used.

Diuretic teas

some examples of prescription

- Herba Equiseti (horsetail)* 20p
- F. Uvae ursi (Bearberry)* 40p
- F. Menthae (peppermint) 10p

- F. Betulae (birch tree) 10p
- H. Equiseti* 10p
- R & H. Taraxaci (dandelion) 10p
- F. Melissa (balm) 10p
- Fr. Rosae caninae (dog rose) 10p

* Supported by German Commission E

Diuretic teas

some examples of prescription

- Fr. Petroselini (parsley)* 30p
- H. Equiseti (horsetail)* 30p
- H. Thymi (thyme) 30p

- H. Solidaginis (goldenrod)* 25p
- F. Menthae 20p

* Supported by German Commission E

Diuretic teas

some examples of prescription

- F. Betulae (birch tree) 20p
- Fl. Helichrysi
(dwarf everlast, immortelle) 10p
- F. Sennae 5p
- Fr. Cynosbati (prickly gooseberry) 5p
- Fr. Coriandri (coriander) 5p

- Fl. Helicrysi (immortelle) 20p
- F. Urticae (stinging nettle)* 10p
- F. Sennae 10p
- Fr. Cynosbati 5p
- R. Liquiritae (liquorice) 5p

* Supported by German Commission E