

# **BOTANICALS AND ARRHYTHMIAS**

By

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## **Arrhythmia**

1. Abnormal electrical activity of the heart
2. Heartbeat (or pulse) may be too fast or too slow; regular or irregular
3. Some arrhythmias are life threatening

**Sinus arrhythmia** refers to a normal phenomenon of mild acceleration and slowing of the heart rate(pulse) that occurs with breathing in and out

**Proarrhythmia** is a new or more frequent occurrence of a pre-existing arrhythmias; it can be a side effect of certain medications and/or herbs

## **Atrial**

1. Premature atrial contraction PAC, APC
2. Wandering atrial pacemaker
3. morphologies
4. Atrial flutter
5. Atrial fibrillation

## **Junctional**

1. Also called SVT- supraventricular tachycardia
2. Junctional rhythm
3. Premature junctional contraction

## **Ventricular**

1. PVC, VPC
2. Idioventricular Rhythm

3. Monomorphic Ventricular Tachycardia
4. Polymorphic VT
5. Ventricular Tachycardia
6. Ventricular Fibrillation

### **Bradycardia**

1. Rhythm less than 60 beats/minute
2. Can be seen in an endurance runner, a pause (sinus arrest) or a block ( AV block)
3. Can present in normal functioning heart (runner, athlete)

### **Tachycardia**

1. Resting heart rate greater than 100 beats/minute
2. Normal response to exercise or stress
3. Can be also caused by caffeine, amphetamines or overactive thyroid

### **Antiarrhythmic Drugs:**

1. Sotalol( Betapace)
2. Lidocaine
3. Propafenone (Rythmol)
4. Amiodarone (Cordarone)
5. Dofetilide(Tikloosyn)

### **Other drugs used:**

1. Amlodipine (Norvasc)
2. Diltiazem( Cardizem);
3. Nifedipine (Procardia)
4. Verapamil (Calan)

### **Atrial Fibrillation**

1. Most common rhythm seen
2. Irregular/ irregular
3. Most common causes
  - CAD
  - Valvular Heart Dx
  - Hyperthyroidism

**Other causes:**

1. Unstable blood sugar
2. Food allergies/sensitivities
3. Heavy metals- -Hg, Ars, Cd
4. Infections
5. Alcohol- Holiday Heart

**Genus Crataegus****Hawthorne**

*C. laevigata*

Also called:

- *Crataegus oxyacantha*
- *Crataegus oxyacabothides*

**Hawthorn berries**

- high content of bioflavinoids
- increases body's ability to use oxygen
- heart ability to use calcium

**Effects:**

1. Negative chronotropic
2. Positive inotropic
3. Coronary dilation
3. Similar to cardiac glycosides

**Hawthorne**

In addition treating arrhythmias: treats

1. Hypertension
2. Ischemic heart disease
3. Congestive Heart Failure

**Dosages used for Hawthorn**

1. 160 – 1800mg for 3-24 weeks
2. Extract of Hawthorne standardized to 18.75% procyanidins
2. Extract of Hawthorn standardized to 2.25 % flavonoids

# Dosages of Hawthorn



## **General Use**

-solid extract: 120-240mg tid of standardized product

-ea: 1-2 tsp berries; steep in 8 oz water

-tincture: 5 ml tid (1:5 dilution)

# *Cactus grandiflores*



*Cactus grandiflores*

*Selenicereus grandiflores*

**Night Blooming Cactus**

Contains flavinoids, rutin, isoquinoline alkaloids and amines

**Use:**

1. Good for cases where there is heart trouble against a background of sympathetic excess, nervous weakness ( F. Petersen 1905)

**Finley Ellingwood (1918)**

“ heart tonic par excellence”

**John W Fyfe(1909)**

cannot be expected to cure structural (as valvular)  
only used when heart rhythm is irregular

**Charles Kane**

“ the plant slows and strengthens

the heartbeat, as do the convallarias.”

“best used when the pulse is weak and fast and cardiac output is decreased”

# *Cytisus scoparius* (Scotch Broom)



Also called

**-*Sarothamnus scoparis***

or Scotch Broom, Butcher's broom, sweet broom, Jews's myrtle

Does not belong to the group of digitalis-like medicinal plants

Contains NO glycosides

Contains an alkaloid, sparteine and oxytyramine

**Actions:**

1. Useful for accelerated atrial arrhythmias
2. regulate the action of the heart
3. improves venous return

### **Scotch Broom**

- non toxic in large doses
- can be given long term
- excellent for those patients with PVC'S , APC'S
- not adequate for tachycardias

### **Dosages:**

- infusion of broom flowers 2.5/180
- 1 tablespoon 3-4 times/daily

**Spartiol-sparteine sulphate** .3 mg  
distilled water to make 30  
15-20 drops three times daily

### **Or...**

sarteine sulphate 2.0 mg  
caffeine/Na benzoate 10  
Bitter almond water 10  
distilled water to make 100  
30 drops three times daily

### **Oral preparation**

called **Depasan**  
(Italian Pharmaceutical Company)  
100mg of **Spateine**

The dose

I utilize for most cases is  
20 drops there to four times daily

# *Leonurus cardica*

## Motherwort



### **Other names**

European motherwort

Lion's tail

Heart-wort

### **Uses:**

1. tachycardia secondary to hyperthyroidism
2. can be used with bugleweed and lemon balm to alleviate hyperthyroid symptoms
3. All in the Mint Family

### **Culpepper wrote**

*"Venus owns this herb and is under Leo. There is no better herb to drive melancholy vapours from the heart, to strengthen it and make the mind cheerful, blithe and merry."*

*“It is of good use to warm and dry up the cold humours, to digest and disperse them that are settled in the veins, joints and sinews of the body.”*

In Chinese astrology, as a Metal Rat this is one herb close to my heart.

Takes its name as it has a relaxing effect on the uterus and taken a week or two before childbirth to stimulate labor.

I owe my birth to the good effects of Motherwort.

**Cardiac uses:**

- calming effect on the heart
- good for the irregular, irregular rhythms as atrial fibrillation
- can lower blood pressure

In Chinese medicine, motherwort was used to promote longevity and strengthen the heart

## Lily of the Valley *Convallaria majalis*



Leaves are said to have the most powerful action followed by the flowers

**The red fruits are highly poisonous**

**Active principles:**

1. pure glycoside: convallatoxin
2. can complete with other glycoside:strophanthin
3. Other constituents: convallamarin, convallarin, and convallarinic acid

**Preparation:**

Convallaria

Cardalept

3. Brady rhythms for severe HF

4/ Tachy rhythms

5. Some companies have combined equal forms of convallaria and crataegus

- Convacard
  - Made by pharmaceutical company: Madaus
  - No chemical manipulation
  - Good preservation
  - Convallaria glycosides in high concentration/equal constant proportions
  - Enteric coated tablets
  - Rapid absorption/ no GI effects

*Thank you for your time this evening.*

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