DIGITALIS PURPUREA (Common Foxglove)

The most commonly used preparation of digitalis is Digoxin, which is obtained from the leaves of Digitalis lanata, a common flowering plant called “foxglove.”
DIGITALIS

• Seat of Action – A.V Node - increased automaticity (increased intracellular calcium) and decreased AV conduction

• Anxious about future, fear of suffocation, Dull in appearance and lethargic.

• Clinical Use – CCF with Arrhythmias like AF, PSVT, Dilated heart, Cardiac dropsy, Cough +bloody frothy mucus

• Contraindicated in Acute Myocardial Infarction: Slows the Pulse n makes it Irregular
PHYSIOLOGICAL ACTION OF DIGITALIS ON THE CVS

• Enhances Frank Starling Mechanism - Myocardial Stretch increases Force of Contraction
• Causes Myocardial hypertrophy
• Decreases Salt & water retention
• Perip Vasodilataion (Para-Sympathetic stimulation
• Slows Heart Rate
• Allows Selective Supply to Essential Organs
• Causes Cough Reflex to Expel Pooled Plasma / Blood in Inter alveolar space
ACTIONS IN HEART FAILURE

• Positive inotropic action
• Slows the rapid ventricular rate by increasing Vagal tone
• Vasodilation
• Increases baro-receptor sensitivity
• Reduces plasma Neurohormones (Norepinephrine, Aldosterone & Renin)
• Diuresis (by inhibition of Tubular reabsorption of Na, of renal Na\(^+\)-K\(^+\)-ATPase and of concentrating and diluting ability and Increased secretion of atrial natriuretic peptide)
INDICATIONS OF DIGITALIS IN VARIOUS TYPES OF CCF

Indicated in
Right sided Heart Failure (COPD)
Chronic Heart Failure (Cardiomyopathy)
Low Output Heart Failure (Hypothyroid, AS)
HOMOEOPATHY – CCF TYPES

• Indicated in Both Edema Predominant & Breathlessness Predominant CHF
DIGITALIS TOXICITY- CAUSES

• Caused by high levels of digitalis in the body, or a decreased tolerance to the drug. Patients with decreased tolerance may have "normal" digitalis levels in their blood.
• Can occur from a single exposure or chronic overmedication, or it may occur in patients with normal blood levels of digitalis if other risks are present.
• Low Potassium & Magnesium increase chances
• Concurrent Diuretic therapy increase chances
• Renal Dysfunction increase chances
DIGITALIS TOXICITY - SYMPTOMS

- Confusion, Drowsiness
- Loss of appetite, Nausea, vomiting, diarrhea
- Irregular pulse, Palpitations
- Visual changes - Blind spots in vision, Blurred vision, Changes in color perception, Yellow or Green Halos or rings of light around objects or Seeing lights or bright spots
- Decreased urine output
- Difficulty breathing when lying down
- Excessive Nocturia
- Dropsy
DIGITALIS INVESTIGATION GROUP (DIG)

TRIAL

• Was conducted coz, while digitalis has been in common use for many decades, there was little data from randomized trials to document its efficacy in treating heart failure. The DIG trial was designed to put the issue to rest once and for all.

• Main findings - Digoxin does not improve mortality in patients with heart failure, but it does seem to reduce the need for hospitalization in those patients.

• Women in the DIG trial who received digoxin had a 4% increase in CVS death, as compared to women taking placebo. This translates to one excess death for every 25 women taking digoxin.
• Digoxin might substantially increase the risk of death.

• In the modern era, even taking the results of the DIG trial at face value, there are far more effective treatments for heart failure than digoxin. If Beta blockers, ACE inhibitors and diuretics are used to their full potential, it is likely that digoxin will not be needed (and may not be additionally effective) at all.

• Using digoxin in women with heart failure before Beta blockers & ACE inhibitors have been added, and their doses maximized, ought to be considered bad medicine.
SHORT SURVEY IN 56 PHYSICIAN’S IN CENTRAL INDIA ON USE OF DIGOXIN IN CLINICAL PRACTICE (2012)
DIGITALIS IN HOMOEOPATHY

• Sudden S/o “the heart stood still”; the heart would stop beating if she moved
• Pulse very small, slow, feeble, intermitting every 3rd, 5th & 7th beat
• Blueness, coldness & suffocation
• Despondency, fearful, anxious for the future,
• < sitting erect, after meals, music
• > empty stomach, open air
• C/I during the episode of myocardial infarct even when the pulse is slow, In the ECG, Digitalis shows ST depression where as in a myocardial infarct there is ST elevation,
DIGITALIS (IN HOMOEOPATHY) FOR SPECIFIC CARDIAC ARRHYTHMIAS

- Supraventricular tachycardia (due to increased automaticity) + slow ventricular response (due to decreased AV conduction) - e.g. Atrial tachycardia with block
- Frequent PVCs  Ventricular bigeminy, Trigeminy
- Sinus bradycardia or slow AF
- AV block (1st, 2nd & 3rd degree)
- Regularized AF (AF + Complete heart block + junctional or ventricular escape rhythm)
- Ventricular tachycardia (polymorphic & bidirectional VT)
The most common T-wave abnormality is a biphasic T wave with an initial negative deflection and terminal positive deflection. This is usually seen in leads with a dominant R wave (e.g. V4-6). The first part of the T wave is typically continuous with the depressed ST segment. The terminal positive deflection may be peaked, or have a prominent U wave superimposed upon it.
BIGEMINY

PAROXYSMAL ATRIAL TACHYCARDIA + BLOCK
COARSE AF + 3rd DEGREE AV BLOCK + JUNCTIONAL ESCAPE RHYTHM
Atrial Tachycardia (P @ 150/m) + 2\textsuperscript{nd} Degree AV block (A:V = 4:1) + Premature Ventricular Complexes
ATRIAL FLUTTER + SLOW VENTRICULAR RATE (Digoxin toxicity)
BIDIRECTIONAL VENTRICULAR TACHYCARDIA
(Broad complex tachycardia + frontal-plane axis alternates by 180 degrees with each successive beat)
REPERTORY

• Chest – congestion, heart; Constriction, night; Constriction, falling asleep; Dilatation of heart
• Chest- fullness of heart; hepatization of lung dropsy, dis with organic; hypertrophy of heart, infiltration of heart, lungs;
• Respiration- difficult, midnight; paroxysmal
• Cough- night; choking
• Breathing- rattling, infants in
ARSENICUM ALBUM

- State of disposition = Mental Distress, Fear++, Anxious, Restless, Thirsty (small sips of chilled water)
- Xtreme Cardiac pressure or burning. Cannot get enough air in lungs – will die. A Remedy before putting the patient on Mechanical Ventilation
- Sudden LVF – Highest potency – Repeat 15-20 mins - response in 30-40 mins
- Ars acts temporarily. To stop relapse of Failure – use Phos – 1M, 1 dose
ANTIMONIUM TARTARICUM

• State of disposition = Depressed, Hopeless, Exhausted, Sleepy, Thirstless, Milky coated tongue
• Cyanosis (tinge), Basal Rales, Edema
• Symptoms << heat, stuffiness of room but dislikes fan or blast of air. Hates wearing an Oxygen Mask.
• H/O gradual progressive Failure – High Potency and repetition in Fractional doses in 1-3 hours
CARBO VEG

• State of Disposition – Mentally dull, foggy in their outlook, extreme air hunger, cold clammy limbs but want them uncovered. Desire air circulation. Cannot bear any clothing around the neck. Gaseous distension of epigastrium and good deal of flatulance.

• Collapse – Low BP, Low Volume & Rate Pulse

• Craves Oxygen inhalation. A Remedy for weaning the patient from Mechanical Ventilation

• Stop CV as soon as improvement occurs and follow-up with Kali Carb
CHINA

• Suffocative attacks < walking,
• Cardiac Dropsy,
• Mentally - Irritable, sensitive, Hurts others feelings,
• Dull look, pale waxy face,
• Pulse - strong, hard, rapid, irregular - ventricular tachycardia (as opposed to the bradycardia of Digitalis)