



EBM

# Gelsemium sempervirens

Léon Scheepers M.D.

Text Michel Van Wassenhoven M.D.





# Gelsemium sempervirens

- Possibility
- Probability
- Confirmation
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- Verification



# Possibility

## **Pharmacology:**

- Fresh or dry roots (PhEur-GHP-FP): highly poisonous; various indole alkaloids (Gelseminine, Gelsemine a.e.), some with properties similar to strychnine.



# Possibility

## **SYMPTOMS:**

Analgesic, CNS depressant, cardio- depressant, hypotensive.

Difficult use of voluntary muscles, muscles rigidity & weakness, dizziness, loss of speech, dry mouth, visual disturbances, trembling of extremities, profuse sweating, respiratory depression, convulsions.

Respiratory failure may cause death.



# Probability

**Proving:** Henry (USA) 1852, tincture, 3 male provers

- **Mind:** dullness, disinclination to conversation.
- **Generals:** weak, pale, nauseous & trembling legs at sight of blood or severe wounds.
- **Sensations:** sensation as if limbs could not be made to move another step; heavy weight in limbs.



# Confirmation

**Provings:** 149 provers, 1573 symptoms

Keynotes:

- **Constitution:** excitable, irritable, sensitive.
- **Mind:**
  - Bad effects from fright, fear, exciting news
  - Anticipation brings on diarrhoea or frequent urination
  - Stage fright.
  - Desire to be quiet, to be alone.
  - Children: fear of falling, grasp the crib or seize the nurse.



# Confirmation

## **PHYSICAL:**

- General depression from heat of sun or summer.

## **HEAD:**

- Vertigo with diplopia, dim vision, loss of sight; seems intoxicated when trying to move.
- Headache
  - preceded by blindness, > by profuse urination.
  - beginning in the cervical spine > extend over the head.
- Sensation of band around the head above eyes.



# Confirmation

## **Eyes:**

- Great heaviness of the eyelids

## **Cardio-vascular system:**

- Fears heart will cease beating.
- Slow pulse of old age.

## **Nervous system:**

- Lack of muscular co-ordination





# Confirmation

## **FEVER:**

- Chill without thirst.

## **MODALITIES:**

- < mental emotion or excitement, bad news, tobacco smoking, when thinking of his ailments.

- Ref. Allen T. Encyclopedia of Pure Materia Medica (Vol 1-10) New York, USA : Boericke & Tafel/ Philadelphia, USA: Boericke & Tafel, 1879 // Bradford T. Index of Homeopathic Provings. New Delhi, India B.Jain Publishers. 2000. // Dake J, Hughes R. Cyclopaedia of Drug Pathogenesis (Vol 1-4) London: Gould/ New Delhi, India B.Jain Publishers. 1891. // Steoenson J. Hahnemannian Provings – A Materia Medica and Repertory 1924-1959. Bombay, India: Roy and Co/ New Delhi, India B.Jain Publishers. 1963 . /// Allens Keynotes. H.C. Allen. B. Jain Publisher. New Delhi, India.



# Corroboration

**Some example out of 43 publications** (<http://www.carstens-stiftung.de/hombrex/>):

## **Medical analyser system:**

- Heart rate variability; Blood flow variability; Autonomic nervous system.

## **Microarray:**

- Microarray studies exist and show where and how the remedy will act

# Corroboration

## **Neurophysiology, EEG in rats:**

- Gelsemium D4 induces changes in electro-chemical neurotransmission of the most important cations  $Ca^{2+}$ ,  $Na^{+}$  and  $K^{+}$  playing a role in the excitability of the neurons.

## **Anxiety assessment method in rats:**

- Gelsemine, the major active principle of the yellow jasmine (Gelsemium) is an anxiolytic.
- Ref. An exploratory study on scientific investigations in homeopathy using medical analyzer . Mishra N, Muraleedharan KC, Paranjpe AS, Munta DK, Singh H, Nayak C. Regional Research Institute for Homoeopathy , CCRH, Mumbai, India. J Altern Complement Med. 2011 Aug;17(8):705-10 . // Extreme sensitivity of gene expression in human SH-SY5Y neurocytes to ultra-low doses of Gelsemium sempervirens. Marzotto & al. BMC Complementary and Alternative Medicine. 2014, 14:104 . // Dimpfel W, Biller A. In vivo and in vitro neurophysiological findings in the rat in the presence of Coffea D6, Gelsemium D4 and Veratrum D6 extracts. Scientific Framework of Homeopathy 2014 . // Behav Brain Res. 2013 Sep 15;253:90-4. doi: 10.1016/j.bbr.2013.07.010. Epub 2013 Jul 11. Pharmacological effect of gelsemine on anxiety-like behavior in rat. Meyer L, Boujedaini N, Patte-Mensah C, Mensah-Nyagan AG.

# Verification

One example out of the **150 authors** describing 8087 clinically verified symptoms of Gelsemium:

## **Symptoms:**

- Anxiety from grief or future events. Anxiety in stomach.
- Lassitude and trembling in muscles.
- Using Likelihood ratio calculations for chronic patients, most valuable symptoms to approach systematic efficacy of the prescription are **tenacious anxious thoughts after grief** or in **front of future events**.



# Verification

## **Indications:**

- Most frequent used diagnoses are anxiety and stress (54% of the patients); 16% stress gastralgia.
- Other diagnoses in diminishing order: hay fever, urination urging, stress precordialgia, stress colitis, migraine, allergic sinusitis, menstrual disturbances. Flu-like symptoms are considered for acute use when there is muscle pain and weakness, waves-like chill in back, and anxiety.
- Ref. First line medicine – Clinical verification – Verification of homeopathic symptoms ISBN (2008) 978-2-87491-003-6 /Van Wassenhoven M.



# OXFORD EBM SCALE.

## LEVEL 1

- 1a: SR (Systematic review) of RCT's.
- 1b: Individual RCT

## LEVEL 2

- 2a: SR of cohort studies
- 2b: Individual cohort studie
- 2c: "Outcomes" research; Ecological studies.

## LEVEL 3:

- 3a: SR of case-control studies
- 3b: Individual case study

## LEVEL 4:

- Case-series

## LEVEL 5:

- Expert opinion



# Verification

## **Animal surveys:**

- The overall pattern of results provides evidence that *Gelsemium sempervirens* acts on the emotional reactivity of mice, and that its anxiolytic-like effects are apparent, with a non-linear relationship, even at high dilutions.
- This pooled data analysis confirms and reinforces the evidence that *Gelsemium s.* regulates emotional responses and behaviour of laboratory mice in a nonlinear fashion with dilution/dynamization.

# Verification

## **Human survey:**

- Sempervirine (extract of *Gelsemium sempervirens* in 5, 7, 30CH) have a significant anxiolytic effect on animals (Guillemain et al 1989; Cardenne M 1991) and in human in 5, 7 9CH, using the “State-Trait Anxiety Inventory” (STAI) in two groups of 60 patients (Sempervirine versus benzodiazepine) have a statistically significant comparable efficacy on anxiety and an added change in personality (anxious component) at long time for the Sempervirine group.





# Verification

**EBM level 1a for animals and 2b for humans** (Individual cohort clinical trial) and all lower levels; an attempt to reach level 1 with Gelsemium in psychiatric disorders with anxiety failed. No ethical problems to prescribe homeopathy for patients. This fact is confirmed by the EPI-3 survey.

- Ref. Bellavite P, Magnani P, Zanolin E, Conforti A. Dose-effect study of Gelsemium sempervirens in high dilutions on anxiety-related responses in mice. *Psychopharmacology (Berl)*. 2010 Jul;210(4):533-45. doi: 10.1007/s00213-010-1855-2. Epub 2010 Apr 20 // Testing homeopathy in mouse emotional response models: pooled data analysis of two series of studies. Bellavite P, Conforti A, Marzotto M, Magnani P, Cristofolletti M, Oliosio D, Zanolin ME. *Evid Based Complement Alternat Med*. 2012;2012:954374. doi: 10.1155/2012/954374. Epub 2012 Apr 4. PMID: 22548123 [PubMed] // Dorfman (P), Téttau (M). Applications cliniques de la recherche pharmacologique. *Cahiers de Biothérapie* n°125 Décembre 1993-Janvier 1994. // Paris A1, Schmidlin S, Mouret S, Hodaj E, Marijnen P, Boujedaini N, Polosan M, Cracowski JL. Effect of Gelsemium 5CH and 15CH on anticipatory anxiety: a phase III, single-centre, randomized, placebo-controlled study. *Fundam Clin Pharmacol*. 2012 Dec;26(6):751-60. doi: 10.1111/j.1472-8206.2011.00993.x. Epub 2011 Sep 28. // Grimaldi-Bensouda L., Engel P., Massol J., , Guillemot D., Avouac B., Duru G., Lert F., Magnier A.M., Rossignol M., Rouillon F., Abenham L., Begaud B., EPI3 LA-SER group. Who seeks primary care for sleep, anxiety and depressive disorders from physicians prescribing homeopathy and other complementary medicine? Results from the EPI3-population survey. *BMJ Open* 2012,2(6): e001498. doi: 10.1136/bmjopen-2012-001498.1-10