ISSN: 2455-2631

March 2025 IJSDR | Volume 10 Issue 3

Spartium Scoparium: a boon for hypertension patients

^{1,2}Dr. Shiny Chalotra

¹Associate Professor & ²DPhD Scholar ^{1,2}Department of Homoeopathic Materia Medica, ¹Lord Mahavira Homoeopathic Medical College & Hospital, Ludhiana (Punjab) India. Dakshin Kesari Muni Mishrilalji Homoeoapthic Medical College, Chhatrapati Sambhajinagar (MS), India. ¹<u>drshinychalotra@yahoo.in</u>

Abstract— Spartium Scoparium is prepared from broom. It contains Spartein sulphate as the chief alkaloid which increase the strength of the heart, slows it and reduces the blood pressure.

It continues the good effects of Veratrum and Digitalis without any of the undesirable effects of either (Hinsdale).¹

Properties: Spartein sulphate occurs as colorless crystals, or a crystalline powder, odorless, and having a slightly saline and somewhat bitter taste.² It is freely soluble in water and in alcohol.

Homoeopathy is a system of medicine based on the 'Law of Similars' which means likes cure likes and this system regards disease as a morbid vital process caused by dynamic influence of noxious agents of the vital principle as manifested through perceptible signs and symptoms, the totality of which constitutes for all practical purposes what goes by the name of disease.

Homoeopathy regards all the structural changes in the body as end-results of morbid vital process.³ (Abstract)

Index Terms—Spartium Soparium, Blood pressure, hypertension, homoeopathy. (key words)

I. INTRODUCTION

Blood pressure is defined as the lateral force which the blood exerts against the walls of the vessels through which it flows.

The arterial blood pressure is regulated by various factors mainly

- peripheral resistance and
- cardiac output; and to some extent
- by the elasticity of the walls of the larger arteries,
- by the volume of blood in the arterial system and
- the viscosity of the blood.⁴

Although there is no universal agreement, repeated blood pressure readings over 140/90 mm of Hg in adults, are considered by most as hypertension or high blood pressure.⁴

II. REVIEW OF LITERATURE

Hypertension is a chronic condition of concern due to its role in the causation of coronary heart disease, stroke and other vascular complications. *It is the commonest cardiovascular disorder, posing a major public health challenge to population in socio-economic and epidemiological transition.* It is one of the major risk factors for cardiovascular mortality, which accounts for 20-50 percent of all deaths.⁵

In early stages, hypertension may be *intermittent*. The blood pressure is usually labile, rising to an abnormal degree under the influence of such stimuli as emotion, exercise and cold. Later, the resting blood pressure becomes permanently elevated.⁴

The average figures for normal blood pressure in mm Hg at various ages are 65/40 at birth, 90-110/50-70 in childhood and 120/80 in adults.⁴

Epidemiology of hypertension:

Hypertension is an epidemic <u>affecting one billion people</u> and is the commonest risk factor for death throughout the world. **World health statistics 2012** has estimated the prevalence of hypertension to be 29.2% in males and 24.8% in females. Approximately 90 percent for men and women who are non-hypertensive at 55 or 65 years will develop hypertension by the age of 80–85. Hypertension is not limited to rich population and affects countries across all income groups. Out of total 58.8 million deaths worldwide in year 2004, high blood pressure was responsible for 12.8% (7.5 million deaths). World over hypertension is responsible for 51% of <u>cerebrovascular disease</u> and 45% of <u>ischemic heart disease</u> deaths.⁶

Cytisus scoparius (Sarothamnus scoparius), the common broom or Scotch broom, is a deciduous leguminous shrub native to western and central Europe. In Britain and Ireland, the standard name is broom; this name is also used for other members of the Genisteae tribe, such as French or Spanish Broom; and the term common broom is sometimes used for clarification. In other English-speaking countries, the most common name is "Scotch broom" (or Scots broom); however, it is known as English broom in Australia.⁷

- Alkaloid of Broom: Spartein sulphate¹
- Spartein sulphate is also known as Sparteine sulfate (1:1), Tocosimplex, Nsc26253, Sparteal, Spartepur, Spartin.⁸
 Molecular Formula⁸
- $C_{15}H_{28}N_2O_4S$
- Molecular Weight⁸ 332.45882 g/mol.

MeSH Pharmacological Classification:

Anti-Arrhythmia Agents: Agents used for the treatment or prevention of cardiac arrhythmias. They may affect the polarizationrepolarization phase of the action potential, its excitability or refractoriness, or impulse conduction or membrane responsiveness within cardiac fibers. Anti-arrhythmia agents are often classed into four main groups according to their mechanism of action: sodium channel blockade, beta-adrenergic blockade, repolarization prolongation, or calcium channel blockade.⁸

Action and Uses: Spartein has very little action on the central nervous system and experimentally, at least, has no pronounced action on the heart. It slows and weakens the heart. It is not a substitute for digitalis and apparently is of little use. It is not diuretic, but scoparius possesses this action from the scoparin which it contains.²

III. DISCUSSION

The Homoeopathic Approach

The homoeopathic approach to the study of disease is from its clinical standpoint. It regards clinical symptoms totality as the nearest approach to the factual reality. Homoeopathy regards clinical symptoms as those that render themselves perceptible to our senses as a resultant of forces – chemico-physical, vital, psychological – that are acting and reacting in and through the human organism in disease conditions. The clinical symptoms are, thus, dynamic and co-extensive with diseases; whereas pathological changes are static changes brought about as ultimate end results of the disease processes.³

Homoeopathy treats "Man as a whole".

The 'holistic' conception is absolutely necessary to understand the living phenomena of any being. The word 'whole', here, is used in a technical sense to mean something which is more than the sum of its parts. This holistic conception of organism serves to reconcile the materialistic and the vitalistic approach to its study; and Hahnemann long before the ideas became clear and prominent in philosophy, previsaged it and tried place it before the medical profession of his time.³

In §5, Hahnemann writes 'Useful to the physician in assisting him to cure are the particulars of the most probable EXCITING CAUSE of the Acute Disease, as also the most significant points in the whole history of the Chronic Disease, to enable him to discover its FUNDAMENTAL CAUSE, which is generally due to a chronic MIASM.'⁹

In § 80, Hahnemann says – Incalculably greater and more important than the two chronic miasms just named, however, is the chronic miasm of psora, which, while those two reveal their specific internal dyscrasia, the one by the venereal chancre, the other by the cauliflower-like growths, does also, after the completion of the internal infection of the whole organism, announce by a peculiar cutaneous eruption, sometimes consisting only of a few vesicles accompanied by intolerable voluptuous tickling itching (and a peculiar odor), the monstrous internal chronic miasm – the psora, the only real fundamental cause and producer of all the other numerous, I may say innumerable, forms of disease, which, under the names of nervous debility, hysteria, hypochondriasis, mania, melancholia, imbecility, madness, epilepsy and convulsions of all sorts, softening of the bones (rachitis), scoliosis and cyphosis, caries, cancer, fungus nematodes, neoplasms, gout, haemorrhoids, jaundice, cyanosis, dropsy, amenorrhoea, haemorrhage from the stomach, nose, lungs, bladder and womb, of asthma and ulceration of the lungs, of impotence and barrenness, of megrim, deafness, cataract, amaurosis, urinary calculus, paralysis, defects of the senses and pains of thousands of kinds, etc., figure in systematic works on pathology as peculiar, independent diseases.⁹

Therefore, according to the homoeopathic philosophy, in chronic diseases such as hypertension there is a 'maintaining cause' which blocks the path of cure which is attributed to chronic miasm and it needs to be removed by indicated anti miasmatic drugs.

ISSN: 2455-2631

Homoeopathic Use of Spartium scoparium:¹

The effect of spartein sulphate (the alkaloid of Broom) is to cause a *lowering* of the systolic and diastolic pressures of the provers. Sphygmograms also show a condition of lowered blood-pressure. It depresses the heart by poisonous action exerted on the myocardium and this, with the stimulating action of the drug upon the vagus, accounts for the lowered blood pressure and reduced pulse rate. It weakens the cardiac contraction. The total amount of urine is increased. The drug has, therefore, diuretic properties and is useful in dropsy.¹

Albuminuria. Cheyne-Stokes respiration. Irregular heart following grip and various infections. Hypotension used palliatively in physiological dosage to combat arterial hypertension, arterio-sclerosis. Very useful hypodermically 1/10 to 1/4 grain in sustaining heart after stopping habit of Morphia. Spartium is indicated when primarily the muscles of the heart and especially the nervous apparatus is affected. Acts rapidly and lasts three to four days. Does not disturb digestion. Nephritis.¹

Tobacco heart. Angina pectoris. Irregular action, disturbed rhythm due to gas, etc, feeble in nervous hysterical patients. Myocardial degeneration, failing compensation. Also useful in Hypotension. Spartein in 2 grain doses for water-logged cases, cannot lie down. Here it produces much comfort. Has specific action upon the kidneys, enabling them to eliminate and relieve the distress upon the heart.¹

Spartium Scoparium which is famously known as Sarothamanus scoparius is a very effective medicine for the management of hypertension. It is a valuable medicine for lowering the blood pressure and is also helpful in cases of angina pectoris as it acts directly on the myocardium.

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