

VEGETABLE DRUGS OF INDIA

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BY

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Y075952



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1984

PREFACE

India shows such diversity of climates, men, animals and plants as is rarely to be met with in any other part of the globe. Between the biting cold of the snow-clad Himalayas and the scorching heat of her desert regions, all shades of temperature and climate help to produce endless varieties of Flora and Fauna, suitable to and necessary for the needs of human beings inhabiting the land, from the darkest aboriginal savages to men of the highest refinement and culture.

India has been aptly called a self-contained country. Not only has she been supplying her own wants out of her indigenous products, but she also boasts of supplying down to the present day, amongst other articles, many medicinal products to the rest of the civilized world. But the number of drugs supplied to the outside world, or in use in the country itself, dwindles into insignificance when compared with the numberless herbs of medicinal efficacy and virtue, which are lying unrecognised and uncared for, as they still remain undiscovered for want of due investigation and research. The few that have come into use

were brought to light by the untiring energy and perseverance of such western savants as Ainsley, O' shaughnessy, Wise, Roxburgh, Hooper, Dymock and others, in their burning zeal for search after truth and desire to benefit suffering humanity. Their invaluable works ought to be cherished with gratefulness by all medical men and the lay public alike.

But it is a matter of deep regret that even the few plants, the mysterious medicinal properties of which have thus been unravelled, have not yet received sufficient recognition by the medical profession. This is undoubtedly due in a large measure to the dearth of cheap and handy literature on the subject of indigenous drugs. There are some scattered publications, no doubt, on the subject ; but they are either too bulky for the young doctor or convey very little, if any, useful information to the reader.

That eminent scientist of our country, Sir P. C. Roy, C. I. E, Ph. D., D. Sc., has recently commercialised a few of our well known vegetable drugs and these may be said to be now in daily use in almost every household amongst us. But their number is very small. Far wider publicity is now necessary and a thorough and comprehensive

treatment of the entire subject in a handy volume which shall be within easy pecuniary reach of all, is, what the public stands sorely in need of. To meet this really long-felt want I set myself to work a long time ago. It has taken me years of hard and arduous labour to bring out this book. Whether I have been able to supply the want of a suitable book, to some extent, is for my professional brethren to judge.

In this work I have tried my best to make a systematic and thorough treatment of the subject and to make it at once a handy book of easy reference to the busy medical practitioner and a convenient helpbook to the public in general, so that they may avail themselves of the proper remedies at nominal or no cost from the bazars or gardens and wastelands.

I have relied chiefly for much of my information and guidance on the Sanhitas of Charaka and Susruta, the great ancient Hindu physicians of undying fame and such later Hindu medical writers as Vagbhata, Chakradatta and Bhava Misra. I would also acknowledge my indebtedness to Western scholars like Roxburgh, O'shaughnessy, Watt and others whose researches I freely consulted.

I shall thankfully receive any suggestions which may be made for filling up omissions or rectifying mistakes or for increasing the utility of the book in general.

It remains for me now to express my grateful thanks to the various gentlemen who have rendered me help in the preparation of this book. In the first place I wish to express my deep sense of gratitude to Dr U. Banerjee, M. R. C. S. (Eng) L. R. C. P. (Lond) for his constant help and encouragement not only in connection with this book but also in other matters relating to my professional work generally.

My thanks are also due to Rai Bahadur Dr. Satish Chandra Banerjee, Assistant Professor of Physiology, Calcutta Medical College and to Dr. Pran Krishna Acharji, M. A., M. B., for their help and encouragement in my attempt to push on this work.

In conclusion I have to express my obligation to Babu Prafulla Chandra Chakravarty, M. A., B. L., Vakil and Babu Abinash Chandra Chakravarty for their assistance in seeing the book through the press.

CALCUTTA
The 14th April, 1924 } DEVAPRASAD SANYAL.

INTRODUCTION

A few introductory remarks are necessary to enable the students and practitioners of medicine to fully understand and carry out the directions given in this work

Parts of plants used in medicine :—All parts of vegetables may be used in medicine, viz :—

Root, as of chitraka (Plumbago Zeylanica).

Underground stem, as of Surana (Amorphophallus campanulatus).

Leaves, as of Vasaka (Justicia Adhatoda).

Flowers, as of Dhataki (woodfordia Floribunda).

Fruits, as the Myrobalans.

Bark, as of Kurchi (Holarrhena Antidysenterica).

Wood, as of Darvi (Berberis Asiatica)

Gum, as Assafoetida.

Extract, as Catechu, Opium etc.

Sometimes the entire plant is used as Kantakari (Solanum Xanthocarpum).

Preparations : As there is no recognised or official pharmacopœa, the medical practitioner will have to use his own discretion in the selection of the preparation. Most drugs may be administered either in the form of Infusions or Decoctions ; in some cases Liquid Extracts or syrups may also be prepared easily.

Infusions : The infusions should be freshly prepared as they soon spoil in hot climates. In preparing these, the following precautions should be taken :— (1) The solid ingredient should be cut into small pieces, or bruised in a mortar, so that the water may penetrate into the substance; (2) the water should be boiling; (3) the vessel should be covered over to prevent evaporation and (4) after half to one hour it should be strained through a muslin or a clean rag. In some cases cold water is used instead of boiling water.

Decoctions : In preparing decoctions the ingredients are put into a covered vessel with cold water, and allowed to boil on the fire for a certain time. If a larger quantity of water with the substance in it, is to be boiled down to a smaller quantity as in the case of most compound decoctions ordered in this work, then an uncovered vessel should be used. The decoction is concentrated by evaporation and then set aside and strained through muslin whilst still hot. Like infusions the decoctions should be freshly prepared as they become spoiled soon in hot climates.

Powders : Vegetable substances as barks, leaves, fruits etc. have often been ordered to be taken in the form of powders. In preparing a powder the article should be pulverised as finely as possible in an iron mortar, operating only on small quantities at a time, and then passing the particles through a sieve as muslin or fine metallic netting; the portion not passing through the sieve should be returned to the mortar and the operation repeated again.

Ointments : In preparing ointments freshly prepared Ghee (clarified butter) or Sesame oil may be used.

Ceromel, which is a mixture of wax and honey, may also be used in some cases. Vaseline—white or yellow—is an admirable basis for ointments. Lanoline, which is a fat obtained from sheep's wool, makes an excellent basis for ointment ; it is readily absorbed by the skin and may assist in the absorption of the drug used in the ointment. A mixture of equal parts of Lanoline and vaseline has been highly recommended as a basis for making ointments.

WEIGHT AND MEASURES.

MEASURES OF WEIGHT.

The *unit* of weight in this country is the *Tola*, which is equivalent to 180 grains of the British Pharmacopœa—being the weight of a rupee of the present currency.

Half a tola = 90 grains
= the weight of a half silver rupee of the present currency.

One Sikki = A quarter tola
= 45 grains
= the weight of a quarter silver rupee of the present currency

One *Rati* is the weight of a *Gunja*, which is the seed of *Abrus Precatorius*. The *gunja*, however, is equivalent to a diverse number of other seeds by weight ; thus eighteen mustard seeds, four grains of paddy, three grains of barley and two grains of wheat are respectively said to be equal to one *gunja*.

1 Dhan is one grain of Paddy.

4 Dhans = one Rati.

6 Ratis = one anna.

16 Annas = One Tola.

Also

4	Dhans	=	one Rati.
8	Ratis	=	one Masha.
12	Mashas	=	one Tola.
5	Tolas	=	one chittack.
16	Chittacks	=	one seer.

Measures of weight of the British Pharmacopœa.

1	grain	=	grain (i)
437.5	grains	=	one ounce (oz i)
16	ounces	=	one pound (lb)

The Scruple (= 20 grains) is rarely used now a days ; the dram or drachm (= 60 grains) is commonly used, but it is not official.

MEASURES OF CAPACITY OF THE BRITISH PHARMACOPŒA,

One minim	=	mi
60 minims	=	One fluid-drachm
8 Fluid drachms	=	One fluid ounce
20 Fluid ounces	=	One pint (o i)
8 pints	=	One gallon (c)

DOMESTIC MEASURES.

One Tea-spoonful is about one fluid drachm.

One Dessert-spoonful is about two fluid drachms.

One Table-spoonful is about half a fluid ounce.

One wine-Glassful is about one and a half to two fluid ounces.

One Tea-Cupful is about five fluid ounces.

A 'Drop' is generally taken to represent one *minim* ; but drops differ very much in size, and should never be used as a measure of powerful drugs.

Explanation of the Abbreviations used in this work in the lists of the vernacular names of the drugs :—

Sans.	Sanskrit.	Mal.	Malayalim.
Beng.	Bengali.	Can.	Canaresl.
Hind.	Hindustani.	Burm.	Burmese.
Mar.	Mahratti.	Cing.	Cingalese.
Guz.	Guzratti.	Pers.	Persian.
Tam.	Tamil.	Punj.	Punjabi.
Tel.	Telegu.	Kash.	Kashmiri.

VEGETABLE DRUGS OF INDIA

GROUP I.

VEGETABLE DRUGS HAVING *Antipyretic* AND
Antiperiodic PROPERTIES ; SOME OF THEM
ALSO POSSESSING *Antiseptic* PROPERTIES.

TINOSPORA CORDIFOLIA

NATURAL ORDER—MENISPERMACEÆ.

Vern : Sans.—Amrita, Guduchi, Pittaghni (*i. e.* bile
destroyer) ;

Beng.—Gulancha ;

Hind.—Gurach ;

Tam.—Shindil-Kodi ;

Tel.—Tippa-tege ;

Guz.—Gado.

Source : All Parts of Tropical India ; also Burma and
Ceylon.

Parts used in medicine : Generally the stem ; but
the whole plant (containing the stem, leaves and root)
is sometimes used.

Physical Characters : It is a common climbing
shrub generally growing on high trees such as Nim,
Mangoe &c. The fresh stem has a green succulent
bark ; the dry stem is shrunken ; the bark is of a
dull brown colour and is easily separated from the
wood. Taste, very bitter.

Chemical Composition : IT CONTAINS TRACES OF AN ALKALOID "BERBERINE" AND A BITTER PRINCIPLE WHICH HAS NOT YET BEEN ISOLATED. IT ALSO CONTAINS A STARCH.

Preparations : Generally used in the form of an Infusion or Decoction. It may also be used in the form of a Tincture or Extract.

Action and uses.

Externally : It is not used.

Internally : It is a valuable *antiperiodic* in Fevers, and is also a valuable *alterative* and *tonic* and has mild *diuretic* properties. It is very useful in chronic fevers which have resisted other *anti-periodics* and which generally recur after apparent recovery. It is used in a great variety of forms in fevers :—In bilious fevers, it is given in the form of a cold infusion ; in Chronic fevers, with enlargement of the liver and spleen it is generally used in the form of a compound decoction with other drugs having similar properties. The fresh plant is more efficacious than the dry and should always be used, when possible. It is a valuable *Hepatic* stimulant, and is given in cases of Jaundice and torpidity of the Liver. As an alterative and tonic, it is used in General debility, Rheumatism, acidity of the urine, skin diseases and Dyspepsia.

BERBERIS ASIATICA

NATURAL ORDER :—BERBERIDÆ

- Vern* :—(1) The stem and wood ;
 Sans.—Dárvi, Dáruharidrá ;
 Beng.—Dáruharidrá ;
 Hind. & Bomb.—Dárrhalad.
- (2) The extract
 Sans.—Rasánjana.
 Hind. & Bomb.—Rusot ; Raswanti.
- (3) The fruit
 Hind. Bomb. & Pers.—Zarishk.

Source : The Himalayan regions, the Pareshnath Hills and the Nilgiri mountains, at an elevation of 6000 to 10,000 ft.

Parts used in medicine : (1) The stem and wood (2) The Extract (3) The fruit and (4) The root-bark.

Physical Characters :

(1) The stem :—Covered by a soft light brown bark and is generally cut into pieces from 1 to 2 inches in diameter.

(2) The Extract :—It is prepared by boiling together equal parts of a decoction of Indian Barberry and milk, till reduced to the consistence of an extract. It is dark brown in appearance and of the consistence of opium. The taste is bitter and astringent. It is soluble in water.

(3) The fruit :—Known as “Zirishk”, is small, black and sticky.

(4) The root-bark :—Light brown externally and dark brown internally and is brittle. It is very bitter.

Chemical Composition : THE ACTIVE PRINCIPLE CONSISTS OF AN ALKALOID KNOWN AS “BERBERINA”. IT IS A BITTER SUBSTANCE AND EXISTS IN GREAT ABUNDANCE IN THE ROOT AND WOOD. IT DISSOLVES IN ACIDS AND FORMS SALTS OF THE ALKALOID. TWO OTHER ALKALOIDS HAVE ALSO BEEN OBTAINED FROM THE ROOT BUT THEY ARE OF LESSER IMPORTANCE.

Preparations : Decoction, Extract and Tincture.

Action and uses.

Externally : The extract “Rusot” is especially useful in affections of the eyelids ; in painful affections of the conjunctiva the extract is rubbed round the orbit ; in conjunctivitis, the extract is mixed with milk and dropped into the eye ; in chronic ophthalmia, the extract is painted over the eyelids. In painful inflammatory swellings, the extract is applied in combination with opium, alum and rock salt. In abrasions and ulcerations of the skin and in aphthous conditions of the mouth and tongue, the extract is applied with honey.

Internally : The wood and the root-bark are *diaphoratics, Antipyretics, Antiperiodics* and

Tonics. They are generally used in combination with other bitters and aromatics in the treatment of ague with very good results, especially when bilious symptoms and diarrhœa are present. They are also largely used in cases of remittent fever. As antipyretics and antiperiodics, they are considered to be equal to Quinine ; they have also some advantage over Quininæ as frequently repeated doses do not produce any depression of the system or deafness. They are also used in Menorrhagia with good results. The alkaloid Berberine is said to cause contraction of the spleen.

ADANSONIA DIGITATA.

(MONKEY BREAD TREE)

NATURAL ORDER—MALVACEÆ.

Vern : Hind.—Hathi-khatiyán, Gorakh-amli,
 Mar.—Gorakh-chinch ;
 Tam.—Papparappuli, Anaipuliya-maram
 Guz.—Sumpura.

Source : Indigenous in Africa ; cultivated in India, especially on the western coast.

Parts used in medicine : The bark, leaves and the fruit.

Physical Characters : This tree is remarkable for its enormous size. It grows to a great height and is one of the longest-lived in the world. The circumference commonly attains as much as 50 or 60 feet.

The bark has a scabrous epidermis and is united internally with the woody fibre of the trunk. When wounded, the bark yields a white semi-fluid gum which is tasteless and odourless, has an acid reaction, and is insoluble in water.

The fruit varies from 6 to 18 inches in diameter ; it is either cucumber or bottle-shaped and is full of sub-acid pulp. The seeds are kidney-shaped and half an inch in length.

Chemical Composition : THE BARK CONTAINS SOLUBLE AND INSOLUBLE TANNIN, WAX, CHLORIDE OF SODIUM, GUMMY AND ALBUMINOUS MATTERS. THE PULP CONTAINS GLUCOSE, MUCILAGE, GUM, TARTARIC ACID, TRACES OF ALKALINE ACETATE AND BITARTRATE OF POTASH.

Preparations : Generally used in the form of a decoction.

Action and uses.

Externally : The young leaves are crushed and made into a poultice and applied to painful swellings. Powdered leaves are used to check excessive perspiration.

Internally : The bark is *refrigerant, antipyretic* and *antiperiodic* and lessens the frequency of the