



## Leprosy- Surgical History Concept and Traditional Use of Herbal Plants in India

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Received: January 20, 2019; Published: February 12, 2019

### Introduction

India with its great topography and its climatic diversity has a very rich flora and fauna. World health organization estimates over 80% of the people in developing countries depend on medicinal for the primary health needs. BCG vaccine offers a variable amount of protection against leprosy. allopathic drugs may not be sufficient to fight worldwide in treatment of leprosy patients living in developing countries like India.

So, there is an alternative way and which is one of the best option for the treatment of leprosy by medicinal plants which are less cost and biologically safe. Therefore, herbal medicine has played important role in treatment of leprosy in Africa.

Gautama., *et al.* have provided detailed information on 255 plant species that have demonstrated anti-microbial activity among these 35 have been reported in ayurveda for use against leprosy. Here the data collected from available reports on plants used against leprosy disease from India in last few years. The plants families are 40 and 75 species are documented alphabetically on the basis of respective of families, genera and species. Among these species most commonly used and very effective in pharmacological results are illustrated in tabular content (some information about some plants and their available areas).

### Surgical correction of deformities and disabilities in leprosy patients

The aim of this task is to define the strategies to organize such training and to increase awareness among societies and schools. Since the late 1940's an important moment in this regard has been initiated in India which exported this technology to many endemic countries. The surgical techniques are mainly those common to the general orthopedic and plastic surgery fields.

| S. No | Plant botanical Name                        | Vernacular Name          | Region of Origin                         |
|-------|---|--------------------------|--|
| 1     | 1.Acanthaceae<br>( <i>Adhatoda Vasica</i> ) | <i>Adusa/Bakas</i>       | Buxar District of Bihar                  |
| 2.    | <i>Andrographis Paniculata</i>              | <i>Kaalmegh</i>          | Buxar District of Bihar                  |
| 3.    | <i>Achyranthus Bidentata L.</i>             | <i>Minamkachi</i>        | (Meghalaya).                             |
| 4.    | <i>Amaranthus Spinousus L</i>               | <i>Rangasuturia</i>      | Mayong Area of Assam                     |
| 5.    | <i>Bidens Pilosa L</i>                      | <i>Samsa/ Ara-Kajhar</i> | Buxar District of Bihar                  |
| 6.    | <i>Calatropis Procera W.T. Aitton</i>       | <i>Aak/Akwan</i>         | Raigarh District of Chattisghar          |
| 7.    | <i>Citrullus Colocynthis L</i>              | <i>Verripuccha</i>       | East Godavari District of Andhra Pradesh |
| 8.    | <i>Dalbergia Sisso Dc</i>                   | <i>Sisso</i>             | Andhra Pradesh                           |
| 9.    | 9. <i>Evolvulus Alsinoides Linn.</i>        | <i>Shankya Pusp</i>      | Bankura District West Bengal)            |
| 10    | <i>Gloriosa Superb Linn.</i>                | <i>Adavinabhi</i>        | East Godavari Of Andhra Pradesh          |
| 11.   | <i>Holarrhenna Pubescens (L) Wall</i>       | <i>Kurchi</i>            | Udham Singh Nagar In Uttara Khanda       |
| 12.   | <i>Ipomoea Eriocrapa R. Br</i>              | <i>Nakhari</i>           | Reva District of Madhya Pradesh          |
| 13.   | <i>Luffa Acutangula (L) Roxb</i>            | <i>Tori</i>              | Buxar District of Bihar                  |

Table 1

### Surgical rehabilitation and elimination of leprosy

WHO sponsored regimens of MDT has caused a tremendous impact worldwide on leprosy. By the introduction of MDT 1-2 million cases of disabilities have been prevented, by this the concept of leprosy is a curable disease. Some leprosy programmes are associated themselves with TB in order to survive.

### Estimated number of cases in need for specific actions in December 1993 in Brazil

| Action                  | Estimated number |
|-------------------------|------------------|
| Health education        | 39,2593          |
| Physical rehabilitation | 78,519           |
| POD                     | 11,7778          |

Table 2

### Surgical rehabilitation services

Leprosy is biblical disease and it is probably one of the oldest disease to be fully identifies by communities as a nosological entity. In 19th century, due to expressive skin manifestations leprosy was included as dermatological disease and remained as such for long time. Leprosy has been historically an institutional disease and as a communicable disease of public health interest and remains till now.

### Team approach

Leprosy surgery needs a team approach pre and post operative physical therapy is essential to attain good results especially in hand surgery.

Occupational therapy is highly desirable to improve results which helping the patients correctly use their tendon transfers & improve their activities of daily life in a new physical settings.

### Surgeon

Leprosy surgery should be performed by orthopedic and plastic surgeons. The techniques in surgery of leprosy are essentially similar to that of condition in which peripheral nerve damage.

### Some comments and experiences in physical rehabilitation programmes

At least, three concepts of services for surgical rehabilitation have been experienced in last decades:

India, Brazil, Africa.

### India

Rehabilitation services are mainly provided by institution which are fully devoted to leprosy. Training of surgeons is the major item of these institutions.

### Brazil

They have established 20 fully independent teams working in a variety of settings ranging from district hospitals to university hospitals.

### Africa

The strategy seems to be that of travelling reconstructive surgeons:

Main problems in this strategy are:

- The follow up of operated patients.
- The lack of building up expertise locally for continuing surgical activity.

### Treatment of deformities and disabilities

- Surgical rehabilitation has not only the purpose of correcting the deformities and also reducing disabilities.
- Prevention of worsening of present disabilities is an integral part of each procedure.
- This concept is applicable to the most of the common procedures used in leprosy surgery and should be widely commented among leprosy health personnel.

### Hand surgery

Claw hand correction can be easily carried out with 2 choice procedures

- a) ZANCOLLIS LASSO for mobile hands.
- b) BUNNELS sub limits transferred to the extensor hood for more stiff hands.

### Foot surgery

Correction of drop foot by tibialis posterior tendon transport and clawtoes correction by two important procedures:

- a) Which restore gait and fully worsening of deformities particularly fore foot and lateral border ulcers.

### Face surgery

- Most of the problems in face surgery of leprosy are non-paralytic in origin
- Lagophthalmos is most threatening condition in face surgery.
- Best choice is temporalis transfer.
- The surgeons mainly prefers the ANDERSONS TARSALS STRIP procedure

### Future trends in leprosy surgery

The future of leprosy surgery as

- o Surgical Technique.
- o Activity Related to Control Programme.

### Technique

- o Microsurgical technique could have some applications for specific situations in leprosy.
- o This surgery demands highly qualified surgeons and some expensive materials.
- o The most challenging issue in leprosy surgery is the recovery of lost sensation.

### Part of control activity

- o Reduction of prevalence and the progressive integration of care of leprosy affected persons in to the general health services.
- o It is mandatory that these services should have the capacity to later to this demand.
- o Training to health personnel of general health services in leprosy surgery is mandatory and urgent.

**Volume 3 Issue 3 March 2019**

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