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Review Paper

Indigenous Herbal Plants used by tribes of Rajasthan; Improving Sexual Performance and Problem of Sexuality

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Abstract
The aim of present study was to summaries the literature on medicinal plants prepared by survey on indigenous knowledge of tribes of Rajasthan on traditional medicinal plants used by them for improving their sexual performance and problem associated with sexuality. A total of 88 medicinal plants mentioned by botanist in their survey reports based on their informal and formal discussions, field visits and focused semi-structured interviews with tribes of Rajasthan. Medicinal plants having potential to influence components of male sexual response cycle and treating disease associated with them are compiled by their botanical name, family, common name and parts used . Some of them are scientifically already explored while others clinical and pharmacological investigations are yet to be performed.

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INTRODUCTION:

Rajasthan have geographic area of 342,239 square kilometers, has become geographically the largest state in India acquiring almost 11% of the total Geographical area of India, Located at 23°30´ and 30° 11' North latitude and 69° 29' and 78° 17' East longitude. Adjacent to west and northwest to the boundaries of Pakistan, Rajasthan is surrounded by the states of Punjab, Haryana and Uttar Pradesh in north and north east, Uttar Pradesh and Madhya Pradesh, in its east and south east, and by the state of Gujarat in south west. The huge portion of land is acquired by the biggest Indian desert – The Thar Desert also known as Maru-Kantar. The oldest range

of mountains the Aravalli mountain separates them into two zones the desert zone on one side and forest on the other. Mount Abu is the hilly visiting destination in the state and Gurushikhar as the highest peak of Arvalli range of mountains. [1]

Rajasthan is blessed with all three features of mountains, plateaus and plains. In wider terms the topography of Rajasthan can be divided into three main broad categories the Aravalli or the Hilly regions, the Thar and the other arid regions, the Plateaus of Vindhaya and the Malwa, the Fertile plains in the Mewar, the Forest Regions and the Water resources including Rivers and Salt Lakes. Rajasthan has rich biodiversity consisting of a large number of plants, some of which are used for their medicinal value. In present study, we referred different ethno botanical survey conducted by ethno botanist to congregate the medicinal plant used for improving male sexual performance. [2]

Male Sexual problems

Sexual dysfunction can be a result of a physical or psychological problem.

- **Physical causes:** Many physical and/or medical conditions can cause problems with sexual function. These conditions include diabetes, heart and vascular (blood vessel) disease, neurological disorders, hormonal imbalances, chronic diseases such as kidney or liver failure, and alcoholism and drug abuse. In addition, the side effects of certain medications, including some antidepressant drugs, can affect sexual desire and function.
- **Psychological causes:** These include work-related stress and anxiety, concern about sexual performance, marital or relationship problems, depression, feelings of guilt, and the effects of a past sexual trauma.

Sexual dysfunction

Sexual dysfunction or **sexual malfunction** refers to a difficulty experienced by an individual or a couple during any stage of a normal sexual activity, including desire, arousal or orgasm. A thorough sexual history and assessment of general health and other sexual problems (if any) are very important. Assessing (performance) anxiety, guilt, stress and worry are integral to the optimal management of sexual dysfunction. When a sexual problem is managed inappropriately or sub-optimally, it is very likely that the condition will subside immediately but re-emerge after a while.

Categories

Sexual dysfunction disorders may be classified into four categories:

a) Sexual desire disorders
b) Arousal disorders
c) Orgasm disorders
d) Pain disorders

Sexual desire disorders:

Sexual desire disorders or decreased libido are characterized by a lack or absence for some period of time of sexual desire or libido for sexual activity or of sexual fantasies. The condition ranges from a general lack of sexual desire to a lack of sexual desire for the current partner. The condition may have started after a period of normal sexual functioning or the person may always have had no/low sexual desire.

The causes vary considerably, but include a possible decrease in the production of normal estrogen in women or testosterone in both men and women. Other causes may be aging, fatigue, pregnancy, medications or psychiatric conditions, such as depression and anxiety.[3]

Sexual arousal disorders:

Sexual arousal disorders were previously known as frigidity in women and impotence in men, though these have now been replaced with less judgmental terms. Impotence is now known as erectile dysfunction, and frigidity has been replaced with a number of terms describing specific problems with, for example, desire or arousal.

For both men and women, these conditions can manifest themselves as an aversion to, and avoidance

of, sexual contact with a partner. In men, there may be partial or complete failure to attain or maintain an erection, or a lack of sexual excitement and pleasure in sexual activity.

There may be medical causes to these disorders, such as decreased blood flow or lack of vaginal lubrication. Chronic disease can also contribute, as well as the nature of the relationship between the partners.

Erectile dysfunction

Erectile dysfunction or impotence is a sexual dysfunction characterized by the inability to develop or maintain an erection of the penis. There are various underlying causes, such as damage to the nervi erigentes which prevents or delays erection, or diabetes as well as cardiovascular disease, which simply decreases blood flow to the tissue in the penis, many of which are medically reversible.

The causes of erectile dysfunction may be psychological or physical. Psychological erectile dysfunction can often be helped by almost anything that the patient believes in; there is a very strong placebo effect. Physical damage is much more severe. One leading physical cause of ED is continual or severe damage taken to the nervi erigentes. These nerves course beside the prostate arising from the sacral plexus and can be damaged in prostatic and colo-rectal surgeries. Due to its embarrassing nature and the shame felt by sufferers, the subject was taboo for a long time, and is the subject of many urban legends. Folk remedies have long been advocated, with some being advertised widely since the 1930s. The introduction of perhaps the first pharmacologically effective remedy for impotence, sildenafil . in the 1990s caused a wave of public attention, propelled in part by the news-worthiness of stories about it and heavy advertising. It is estimated that around 30 million men in the United States suffer from Erectile Dysfunction.[4] However, social stigma, low health literacy and social taboos lead to under reporting which makes an accurate prevalence rate hard to determine. The Latin term impotentia coeundi describes simple inability to insert the penis into the vagina. It is now mostly replaced by more precise terms.

Premature Ejaculation

Premature ejaculation is when ejaculation occurs before the partner achieves orgasm, or a mutually satisfactory length of time has passed during intercourse. There is no correct length of time for intercourse to last, but generally, premature ejaculation is thought to occur when ejaculation occurs in under two minutes from the time of the insertion of the penis.[5] For a diagnosis, the patient must have a chronic history of premature ejaculation, poor ejaculatory control, and the problem must cause feelings of dissatisfaction as well as distress the patient, the partner or both.[6]

Historically attributed to psychological causes, new theories suggest that premature ejaculation may have an underlying neurobiological cause which may lead to rapid ejaculation.[7]

Orgasm disorders:

Orgasm disorders are persistent delays or absence of orgasm following a normal sexual excitement phase. The disorder can have physical, psychological, or pharmacological origins. SSRI antidepressants are a common pharmaceutical culprit, as they can delay orgasm or eliminate it entirely.

Sexual pain disorders

Sexual pain disorders affect women almost exclusively and are also known as dyspareunia (painful intercourse) or vaginismus (an involuntary spasm of the muscles of the vaginal wall that interferes with intercourse). Dyspareunia may be caused by insufficient lubrication (vaginal dryness) in women. Poor lubrication may result from insufficient excitement and stimulation, or from hormonal changes caused by menopause, pregnancy, or breast-feeding. Irritation from contraceptive creams and foams can also cause dryness, as can fear and anxiety about sex. It is unclear exactly what causes vaginismus, but it is thought that past sexual trauma (such as rape or abuse) may play a role. Another female sexual pain disorder is called vulvodynia or

vulvar vestibulitis. In this condition, women experience burning pain during sex which seems to be related to problems with the skin in the vulvar and vaginal areas.

Uncommon sexual disorders in men

Erectile dysfunction from vascular disease is usually seen only amongst elderly individuals who have atherosclerosis. Vascular disease is common in individuals who have diabetes, peripheral vascular disease, hypertension and those who smoke. Any time blood flow to the penis is impaired, erectile dysfunction is the end result. Hormone deficiency is a relatively rare cause of erectile dysfunction. In individuals with testicular failure like in Klinefelter's syndrome, or those who have had radiation therapy, chemotherapy or childhood exposure to mumps virus, the testes may fail and not produce testosterone. Other hormonal causes of erectile failure include brain tumors, hyperthyroidism, hypothyroidism or disorders of the adrenal gland.[7] Structural abnormalities of the penis like Peyronie's disease can make sexual intercourse difficult. The disease is characterized by thick fibrous bands in the penis which leads to a deformed-looking penis.[8] Drugs are also a cause of erectile dysfunction. Individuals who take drugs to lower blood pressure, uses antipsychotics, antidepressants, sedatives, narcotics, antacids or alcohol can have problems with sexual function and loss of libido.[9] Priapism is a painful erection that occurs for several hours and occurs in the absence of sexual stimulation. This condition develops when blood gets trapped in the penis and is unable to drain out. If the condition is not promptly treated, it can lead to severe scarring and permanent loss of erectile function. The disorder occurs in young men and children. Individuals with sickle-cell disease and those who abuse certain medications can often develop this disorder.[10-11]

Table- Plants Containing Aphrodisiac Potentials [12]

S. N.	NAME OF PLANT	COMMON NAME	FAMILY	PART USED
1.	*Abelmoschus esculantus (L)*	Bhindi	Malvaceae	Root
2.	*Abelmoschus moschatus*	Musk mallow	Malvaceae	Seed
3.	*Abrus precatorius* L.	Crab's Eye	Paplionaceae	Seed
4.	*Abutilon indicum* (Linn.)	Thuthi	Malvaceae	Seed, root,
5.	*Acacia catechu* Willd.	Catechu	Mimosaceae	Heartwood
6.	*Acacia nilotica* L. Willd.	Gum Arabic tree	Fabaceae	Bark
7.	*Achyranthes aspera Linn.*	Apamarg, Latjeera	Amaranthaceae	Root
8.	*Acorus calamus* Linn.	Sweet flag	Araceae	Rhizome
9.	*Actiniopteris radiata* Sw.	Morshikha	Actinopteridaceae	Whole plant
10.	*Allium sativum* L.	Garlic	Liliaceae	Bulb
11.	*Allium cepa* L.	Piaz	Liliaceae	Bulb
12.	*Aloe vera*	Dhritkumari	Liliaceae	Gel extract from leave
13.	*Amaranthus spinosus L.*	Chaulai	Amaranthaceae	Leaves, Whole Plant
14.	*Asparagus racemosus* Willd.	Asparagus	Liliaceae	Root
15.	*Arachis hypogaea Linn.*	Peanut	Fabaceae	Seeds
16.	*Argyreia nervosa*	Adhoguda	Convolvulaceae	Root
17.	*Artocarpus heterophyllus*	Jack tree	Moraceae	Fruit, Seed,
18.	Azadirachita indica	Neem	Meliaceae	Root
19.	Aristolochia indica L.	Iswaramul	aristolochiaceae	Whole plant
20.	Bacopa monnieri L.	Brahmi	Scrophulariaceae	Whole plant
21.	*Bauhinia vahlii*	Camel's Foot Climber	Caesalpiniaceae	Seed
22.	*Bauhinia variegate* Linn.	Bauhinia	Caesalpiniaceae	Bark
23.	*Blepharis edulis Linn.*	Utangan/ Shikhi	Acanthaceae	Seeds
24.	*Boerhavia diffusa L.*	Punarnava	Nyctaginaceae	Root
25.	*Bombax ceiba* Linn.	Silk-Cotton Tree	Bombacaceae	Bark
26.	*Butea frondosa* Roxb.	Flame-of-the-forest	Papilionaceae	Whole plant
27.	*Cajanus cajan* (L.) Millsp.	Arhar	Fabaceae	Root
28.	*Carica papaya* L.	Papita	Caricaceae	Fruit

29.	*Cannabis indica* L.	Indian hemp	Cannabinaceae	Leaf
30.	*Cannabis sativa*	Bhang	Cannabinaceae	Leaf
31.	*Capsicum annuum* L.	Capsicum	Solanaceae	Seed
32.	*Cassia occidentalis* Linn.	Kasondhi	Fabaceae	Leaf
33.	Celastrus paniculatus wild.	Vandangul	celastreaseae	Seed
34.	*Chenopodium album* L.	White goosefoot	Chenopodiaceae	Seed
35.	*Chlorophytum tuberosum* Baker.	Safed musli	Liliaceae	Whole plant
36.	*Cissus quadrangularis* Linn.	Edible stemmed Vine	Vitaceae	Root
37.	*Cocculs cardifolia* Linn.	Guduchi	Menispermaceae	Stem, leaf, Root
38.	*Commiphora mukul* Hook. ex Stocks	Indian bdellium Tree	Burseraceae	Root, leaf
39.	*Desmodium gangeticum* Linn.	Desmodium	Fabaceae (Papilionaceae)	Root
40.	Coriandrum Sativum	Coriander	Apiaceae	Leaf
41.	*Diospyros melanoxylon* Roxb.	East Indian ebony	Ebenaceae	Flower
42.	*Dolichos lablab Linn.*	Flat bean, sem	Fabaceae	Seeds
43.	*Daucus carota L.*	Carrot	Umbelliferae	Root
44.	*Dalbergia sissoo*	Shisham	Fabaceae	Wood
45.	*Emblica officinalis Gaerth*	Emblic	euphorbiaceae	Fruit
46.	*Desmodium gangeticum*	*Desmodium*	fabaceae	Wood
47.	*Euphorbia hirta* L.	Dudhi	Euphorbiaceae	Leaves
48.	*Evolvulus alsinoides L.*	Shankhahuli	Convolvulacae	Whole plant
49.	*Ficus racemosa L.*	Gular	Moraceae	Fruit
50.	*Ficus religiosa* Linn.	Peepal tree	Moraceae	Bark
51.	*Ficus bengalensis L.*	Bor	Moraceae	Latex
52.	*Gossypium arboretum Linn.*	Kapas	Malvaceae	Bark, seeds, leaves, root
53.	*Grewia asiatica* L.	Phalsa	Tiliaceae	Fruit
54.	*Hibiscus rosa-sinesis*	China rose	Malvaceae	Leaf
55.	*Hibiscus labatus murr.*	Jungli bindi	Malvaceae	Whole plant
56.	*Hibiscus sabdariffa* Linn.	Roselle	Malvaceae	Seed, leaf
57.	Hygrophila auriculata	Katathua	Acanthaceae	Seed
58.	*Lagenaria vulgaris* Ser.	Bottle gourd	Cucurbitaceae	Fruit
59.	*Linum usitatissimum L.*	Alsi	Linaceae	Seed
60.	*Mangifera indica* L.	Mango	Anacardiaceae	Bark
61.	*Mimosa pudica* L.	Thottasiniki	Mimosoideae	Aerial part
62.	*Mirabilis jalapa L.*	Four o' clock plant	Nyctaginaceae	Root
63.	*Momordica charantia* Descourt	Bitter Melon	Cucurbitaceae	Leaf
64.	*Mucuna pruriens* Linn. DC.	Poonai kali	Fabaceae	Seed
65.	*Nerium indicum* Mill.	Kaner/Kanail	Apocynaceae	Roots
66.	*Passiflora incarnate* L.	Wild Passion	Passifloraceae	Leaf
67.	*Papaver somniferum* L.	Poppy plant	Papaveraceae	Flower
68.	*Pedalium murex*	Burra Gokhru	Pedaliaceae	Whole plant
69.	*Piper betle* Linn.	Vettrilai	Piperaceae	Leaf
70.	*Polyalthia suaveolens* Engl.	Polyalthia	Annonaceae	Fruit, root, leaf
71.	*Psoralea corylifolia Llinn.*	Bavaci	Fabaceae	Fruit
72.	*Punica granatum L.*	Anar	Punicaceae	Fruit
73.	*Rauvolfia vomitoria*	Afzel. Poison devil's pepper	Apocynaceae	Root
74.	*Ricinus communis* L.	Castor	Euphorbiaceae	Seed
75.	*Saccharum spontaneum* Linn.	Kasa	Poaceae	Root stock
76.	*Santalum album* Linn.	Sandal wood	Santalaceae	Heart wood
77.	*Sesamum indicum* Linn.	Tilli / Til	Pedaliaceae	Seds
78.	*Shorea robusta geartn*	Sal, Kabba	Dipterocarpaceae	Bark, leaves, fruit
79.	*Sida cordifolia* Linn.	Countary-mallow	Malvaceae	Root, seed
80.	*Sida rhombifolia*	Bagauli	Malvaceae	Root
81.	*Solanum indicum* Linn.	Indian night Shade	Solanaceae	Root
82.	*Solanum melongena Linn.*	Brinjal	Solanaceae	Unripe fruit
83.	*Solanum nigrum* Linn.	Aguaragua	Solanaceae	Berries
84.	*Sphaeranthus indicus* Linn.	Mundi	Asteraceae	Seeds
85.	*Syzygium aromaticum* (L.) Merrill & Perry	Clove	Myrtaceae	Dried flower bud
86.	*Tamarindus indica* L.	Tamarind	Fabaceae	Bark
87.	*Tamarix aphylla* (L.) Karst	Athel tamarisk	Tamariaceae	Bark

DISCUSSION:

Most of the natural plants in this review are those with aphrodisiac potentials. In this review some medicinal plants are used in ayurvedic formulations as aphrodisiac potentials to enhance performance as well as to increase vigor and vitality. Herbals drugs have a potential to treat the various types of body ailments.[13] The efficacy of some medicinal plants like used by tribal of Rajasthan has been proved by modern medicine like *Asparagus racemosus, Mucuna pruriens, Tribulus terrestris, Withania somnifera*, however most remain largely unexamined. In view of the wide range of medicinal plant and their traditional claim related to the treatment and management of male sexual performance, it is imperative that more clinical and pharmacological studies should be conducted to investigate unexploited potential of this traditional knowledge. [14]

CONCULSION:

The search for natural supplement from medicinal plants is being intensified probably because of its fewer side effects, its ready availability and less cost. All the plants in this review may have significant pharmacological activity. The herbs can be effective aphrodisiacs; moreover, isolation and identification of active constituents from plants may bring a dynamic change in the modern world. Many of the plant materials showed positive aphrodisiac activities in animals. For the determination of the safety and effectiveness of these substances for sexual enhancement it is necessary to test pre-clinically in animals and clinically in human being before consuming the drug. Further studies are also needed to check.

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