



ORIGINAL RESEARCH PAPER

Ayurveda

POTENTIAL AYURVEDIC HERBS FOR MANAGEMENT OF SEXUAL DYSFUNCTION

KEY WORDS:

Ronak Shah*	RAV Research Pvt Ltd, Mumbai, Maharastra, India *Corresponding Author
Kadamb Patel	School of Applied Science, Temasek Polytechnic, Singapore
Shabbir Moochhala	Fifthsense Pte Ltd, Singapore Department of Pharmacology, Yong Loo Lin School of Medicine, National University of Singapore

ABSTRACT

Sexual dysfunctions affect the quality of life, erectile dysfunction (E.D.), premature ejaculation (PME) reduced desire, and failing to achieve orgasm are common sexual dysfunctions which have a widespread presence across global populations. Health professionals focusing on behavioural variables, such as physical exercise, body mass index (BMI) and leanness reported, men with a body BMI of greater than 28.7 kg / m² is expected to have a 30 per cent higher chance of developing erectile dysfunction. There are significant increases in sexual functions among subjects who undergo intensive dietary changes, including weight loss and regular exercise. Treatment of erectile dysfunction includes oral therapy with phosphodiesterase type 5 inhibitors which have various side effects. Alternative herbal therapies are offering holistic products with little or no side effects for the management of sexual dysfunctions. Herbal products backed with clinical studies are widely accepted in the market place. The review focuses on the use of ayurvedic herbs for management of sexual dysfunctions and summarized clinical trails outcomes of commercially available herbal products for the management of sexual dysfunction

Introduction

Sexual dysfunctions (S.D.) are one of the major disorders that are distinguished by changes in the pathophysiology of the sexual response cycle or in sexual desire that deters the individual or couple from deriving contentment from sexual activity (Laumann et al. 1999)

Sexual dysfunctions have harmful effects on the interpersonal relationships or quality of life of the individuals. However, the issue of Sexual dysfunctions remains a paradox considering the fair amount of taboo, uneasiness and seclusion that is associated with it. It also falls in the landmark of psychiatric disorders and other medical disorders which makes it demanding to the clinician

The typical sexual dysfunctions observed were erectile dysfunction (E.D.), premature ejaculation (PME) reduced desire, and failing to achieve orgasm. With the age rise, the studies reported the prevalence of E.D. ramps up. The rates were also proportionate across different study population around the globe. Studies in Asia recorded the prevalence of E.D. for ages 40–49 years at 7 % – 15 % and for ages 60–70 at 39 % – 49 %. Results from Australian studies showed prevalence in ages 40–49 years at 5 % – 6 % and in ages 50–59 at 12 % – 13 %. Overall, the findings from North America, Latin America and Europe have produced similar outcomes (Lewis et al. 2011)

Studies have concluded the elevated prevalence of E.D. in the Asian as compared to the other regions. Further evaluation of the studies also showed that premature ejaculation was one of the most commonly elicited conditions with a higher prevalence in the Asian and North American clusters. The other dysfunctions reported were an inability to reach orgasm and dyspareunia. Overall, 28% of the males and 39% of the females reported at least one S.D. (Lewis RW 2013)

In India, Sathyanarayana (2015) reported 21.15% of male subjects suffering from sexual disorder; erectile dysfunction prevalence was 15.77%. In 8.76 % of male subjects, premature ejaculation was found prevalent. Relative to other age groups, male sexual illnesses were extremely prevalent in age groups of 41-50 and 51-60. Erectile dysfunction is low among age groups of 26-30 years, and the lowest among age groups of 51-60. Cross-sectional and community-based study indicates the

prevalence of erectile dysfunction shows an age-dependent mild rise. By the year 2025, the number of E.D. cases across the world will reach 322 million (Ayta et al. 1999)

Male sexual disorders were more among subjects with chronic medical illness compared to those without chronic medical illness. Many researchers have shown that the prevalence of sexual dysfunction increases with age, history of arthritis, allergy, heart disease, untreated ulcer, diabetes and smoking (Sathyanarayana et al. 2015)

Role of Nutrition and Lifestyle in Sexual Dysfunction

Follow-up research by healthcare professionals found many behavioural variables, such as physical exercise and leanness correlated with erectile function. Men with a body mass index (BMI) of greater than 28.7 kg / m² is expected to have a 30 per cent higher chance of developing erectile dysfunction compared to people with a BMI of 25 or below. (Bacon et al. 2003)

Higher rates of physical activity indicate a substantial decrease in erectile dysfunction prevalence. The prevalence of erectile dysfunction contributes directly to obesity and overweight. The findings of descriptive research indicated a baseline BMI of 28 kg / m² significantly predicts the long-term development of erectile dysfunction, while initially overweight participants persisted at a high risk of developing erectile dysfunction, given the weight loss follow-up (Esposito et al. 2004)

A randomized controlled trial of 110 obese men with moderate erectile dysfunction with significant behavioural changes showed that approximately one-third of participants in the experimental group regained normal erectile function during the study. Such findings indicate that there are major increases in a sexual performance in people who undergo intensive dietary changes, including weight loss and regular exercise. (Rosen et al. 2005)

Pharmacological Management of Sexual Dysfunction

The most used therapy for the treatment of erectile dysfunction includes oral therapy with phosphodiesterase type 5 inhibitors (PDE5 inhibitor), such as sildenafil (Viagra®). However, some patients may not be able to tolerate PDE5 inhibitor therapy or may require a lower dose because

of side-effects relating to vasodilation. The oral treatment has the potential side effects such as flushing, dyspepsia, gastrointestinal symptoms, induce hypotension, cause headaches, and nasal congestion, blurred vision, a rash and back pain (McVary KT 2007). An additional concern, when considering the frequent coexistence of erectile dysfunction and Cardiovascular disease is that PDE5 may result in coronary ischaemia (Jackson et al. 2006).

Increased awareness among consumers of side effects of pharmacological drugs has lead consumers to look for alternative therapy with little or no side effects. Acceptance of herbal and alternative therapies is growing for the management of various diseases. There are well established herbal therapies which offer holistic approaches to improve male reproductive health.

Traditional and Herbal Remedies for the Management of Sexual Dysfunction

Procreation was a major moral issue, and social concerns and aphrodisiacs played a significant part in maintaining both male and female potency. The expression 'Aphrodisiac' derives its origin from the Greek goddess of beauty and love, the word 'Aphrodite.' An aphrodisiac is medically any natural agent or material capable of improving sexual efficiency (Shamloul, 2010) and may be of animal, plant, or mineral origin (Kotta et al., 2013). Chinese, Egyptian, Hindu and Roman communities are actively searching for drugs that can enhance physical power (Shah, 2002).

The Indian and Chinese shared a similar aphrodisiac trait as the Romans in believing that consuming an animal's sexual organ, for example, goat testicles, can boost man's sexual ability (Shah, 2002). On the contrary, primaevael Egyptians were using aphrodisiac medications which involved the application of oiled baby crocodile heart to the penis or ingestion of a combination of 37 ingredients which included pine, salt, and a watermelon (Smith, 1974; Nunn, 1996).

Aphrodisiacs are classified based on the therapeutic activity of substance into three groups: (i) those that increase sexual arousal and desire; (ii) those that increase sexual potency through the effectiveness of an erection; and (iii) those that increase sexual pleasure (Sandroni, 2001; Kotta et al., 2013).

People who have erectile dysfunction have continued to explore aphrodisiac plants as an alternative therapy because of their efficacy, accessibility, affordability, and minimal side effects (Sabiou et al., 2016, Sabiou and Ashafa, 2017). Modern aphrodisiac drugs such as sildenafil citrate have reported triggering side effects such as loss of accommodation due to blurred vision, nasal congestion, urinary tract infections and stomach disorder (Kulkarni and Reddy, 1998; Lue, 2000).

Medicinal Herbs with Validated Effects on Sexual Functions

This section describes many time tested Ayurvedic and other traditional herbs, which have a long-standing reputation as a cure for sexual dysfunction. These herbs are an essential part of commercial formulations for improving sexual performance and fertility for males. Apart from these herbs large numbers of plants have also been tested and evaluated for effect on sexual functions and reproductive parameters, Thakur et al. 2014 compiled a comprehensive description and names of these herbs

Based on tradition and culture, many multi herbs formulations emerged across the world; these formulations are clinically examined. Over the decades many such multiherb formulations are commercialized or E.D. with varying degrees of success. Clinical studies support most potent commercial-multiherb aphrodisiacs products available in the current market. Each product has a specific mechanism of actions which are well accepted by scientific communities. Increasing market needs for alternative medicine for sexual disorder will fuel more innovation, and companies are responding with investment in herbal science research and development worldwide. Table 1 compiles commercial herbal products based on clinical studies

Table 1. Clinical studies of herbal products for sexual dysfunctions

No	Author	Product Name / Ingredients	Clinical studies results
1.	Ledda A. et al. (2010)	Prelox (L-Arginine and Pycnogenol)	Prelox shows significant Improvement in erectile function
2.	Kulkarni M.P et al. (2011)	<i>Asparagus adscendens, Withania somnifera, Mucuna pruriens and Tribulus terrestris,</i>	Product was more effective than placebo
3.	Shah G. R et al. (2012)	<i>VigRX (T. terrestris vine, Ginkgo biloba leaf, Panax ginseng root (Crataegus rivularis berry leaf, Bioperine Serenoa repens berry, and Turnera diffusa)</i>	VigRX was effective in improving sexual functions in men
4.	Feng X. T et al. (2012)	<i>Yidin (a combination of 15 Traditional Chinese herbs)</i>	Yidin showed significant Improvement in diabetic patients ED
5.	Punyawudho. B et al. (2013)	<i>Cappra® (Maxim, Cynomorius., Cistanche Deserticola, Cervus Nippon Temminck, Carthamus Tinctorius and Epimedium Brevicornum)</i>	Cappra is useful for mild to moderate ED
6.	Cai. T et al. (2013)	<i>IDIProst Gold (Crocus sativus, S. repens and Pinus bark extract)</i>	IDIProst Gold improves E.D. in men
7.	Nishimatsu. H et al.	<i>Leopin Royal (Cuscuta seed, Epimedium, Garlic, Ginseng, Velvet antler and Bezoar tincture)</i>	Significant Improvement in symptoms of ageing and ED
8.	Udani. J.K et al. (2014)	<i>Biotropics (Eurycoma longifolia and Polygonum minus)</i>	Enhances sexual functions among healthy subjects
9.	Sansalone. S et al. (2014)	<i>Tradamix TX1000 (L-Citrulline, L-Arginine, Alga Ecklonia bicyclis and T. terrestris)</i>	Tradamix improves erectile, and ejaculation functions in patients with mild to moderate ED
10.	Stanislavov. R et al. (2015)	<i>Prelox® (Pycnogenol, Roburins, L Arginine and L-Citrulline)</i>	Restored erectile function to normal after four weeks
11.	Hsieh 2016	<i>AB SCIEX (Serpentes cnidium monnier, Piper nigrum, Panax quinquefolium, Lepidium meyenii Walp, Ophiocordyceps sinensis, Rhodiola rosea and Astragalus membranaceus)</i>	Enhanced effects were observed among impotent patients

12.	Herwig. R et al. (2017)	<i>Green Love (Fructus schisandrae, Euphoria longana, Panax quinquefolius, Rhizoma dioscoreae, Lyceum barbarum, Christianche Salsa, Radix ginseng and. Chingii Hu)</i>	Green love was effective for treating mild to moderate ED
13.	Hussain. S.A et al. (2018).	<i>Plantago ovate, Eurycoma longifolia, Chlorophytum borivilianum, T. Anders, Acacia senegal, Astragalus membranaceus, Mimosa pudica, Bombax ceiba, Hygrophila spinosa and Mucuna pruriens,</i>	215% increase in motility of sperms, a 256% increase in the concentration of sperms and a 154% increase in semen volume after two months apy

CONCLUSION

Sexual function is an integral component of quality of life and is essential for human subjective well-being. Sexual disorders are common, and mood, health and interpersonal functioning are adversely affected. Sexual problems play an important part in male erectile dysfunction and sexual arousal.

Successful treatment of sexual dysfunction may improve not only sexual relationships but also the overall quality of life. Thus, this review has dealt with various alternative approaches by which the medicinal plants are reaching out as an alternative therapy for sexual health

Rich knowledge of Ayurveda; Traditional Chinese Medicine and medicinal plants and herbs from Unani have been aiding in health care since ancient times. People around the world have used herbal medical goods for thousands of years. Medicinal plants and herbs are an essential aspect of the different cultures to cure male infertility problems or to cure reproductive disorders.

Over the past decade, interest in drugs derived from plants increased expressively.

Universally, general populations are taking charge of their management of health or disease. A significant proportion of consumers are adopting alternative "holistic" treatments, mainly herbal or phytopharmaceutical products, to treat a variety of health conditions.

The search for herbal health supplement from medicinal plants escalated probably because of its fewer side effects, its ready availability, and affordability. Allopathy drugs and treatments have limited efficacy, unpleasant side effects, and contraindications in certain disease conditions.

While reviewing different factors that regulate the sexual activity, this analysis discusses a number of medicinal plants and herbs that may theoretically be helpful in the treatment of sexual dysfunctions. In this analysis, all medicinal plants and herbs display important pharmacological activity.

Demands of herbal aphrodisiacs require scientific and clinical studies to understand their effects on humans and their safety profile. These drugs are standardized herbal preparations consisting of complex mixtures of one or more plants called phytomedicines or chemical compounds derived from plants. Medicinal plants are contributing around 25% of all modern medicines are directly or indirectly.

In the last decade, clinical evaluation of many new commercial multi-herbal formulations addressing sexual health is serving to understand exact mechanisms of action, safety profile, and drug interaction. Such detailed scientific studies create affirmative acceptance of commercial multi-herbal products these products

The findings of this analysis showed many medicinal plants and herbs that are common for the treatment of impotence through diverse cultures and practices. The results of traditional and medieval literature, as well as modern medicine records accompanied by medical and clinical studies, establish new possibilities for herbal health supplements

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