

ANALYTICAL AND OBSERVATIONAL CLINICAL EVALUATION OF LIV MUZTANG CAPSULES ON ERECTILE DYSFUNCTION, LOSS OF LIBIDO AND LOSS OF ENERGY (FATIGUE) IN HEALTHY VOLUNTEERS

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ABSTRACT

Vajikarana (Aphrodisiac), a pivotal component within the Ashtanga Ayurveda, is one of its eight major specialties. This discipline revolves around aphrodisiacs, virility, and the enhancement of progeny health. According to the Charak Samhita, the judicious application of Vajikarana (Aphrodisiac) formulations bestows individuals with a robust physique, heightened potency, strength, radiant complexion, and heightened sexual vigor. These attributes contribute significantly to addressing prevalent sexual dysfunctions, encompassing infertility, premature ejaculation, and erectile dysfunction. The therapeutic process involves adhering rigorously to the guidelines outlined in Ayurvedic classics. It incorporates various non-medicinal approaches such as body cleansing methods and the promotion of sexual health through appropriate conduct, behavior, and diet. Personalized herbal and herbo-mineral combinations are administered based on an individual's constitution, aligning with Ayurvedic principles. Despite its potential benefits, several caveats must be considered before embracing Vajikarana (Aphrodisiac) therapy. These include the limited

availability of scientific studies, the risk of herbal and herbo-mineral combinations in the market being adulterated, and the potential for unforeseen side effects. This article advocates for further research in this domain to validate the assertions found in ancient Ayurvedic texts, paving the way for the integration of Vajikarana (Aphrodisiac) therapy into modern medicine. **Liv Muztang Capsule** is prepared by modification of classical method according

to the Ayurvedic pharmacopoeia of India with standard operative procedure which is described for churana and Ghana (Extract) preparation. The herbs of " **Liv Muztang Capsule**, a Ayurvedic rejuvenating formulation described several time in the Ayurvedic Texts, underwent an assessment in a controlled observational clinical trial involving healthy male volunteers aged between 35 to 55 years. The study administered a daily dose of **1- 2 capsule of Liv Muztang Capsule, twice a day, in a form of Ayurvedic Patent Medicine Duly Approved By AYUSH department of Uttar Pradesh**. Over the course of 30 consecutive days, the results demonstrated a statistically significant increase ($P < 0.05$) in treatment of Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue) in healthy volunteers.

INTRODUCTION

Ayurveda, derived from the Sanskrit words "Ayu" (meaning life) and "Veda" (meaning science), stands as the oldest organized medical system in India. Rooted in Hindu scriptures known as the Vedas, ancient texts of wisdom dating back over 5,000 years, Ayurveda also draws insights from Upanishads, Samkhya, and Yoga. It encompasses a holistic approach to healthcare, addressing the interconnected aspects of body, mind, and spirit.

Functioning as more than a therapeutic medical system, Ayurveda is regarded as a science and art of mindful living, aiming to maintain an individual's well-being by harmonizing their body, mind, and spirit with the principles of nature. Beyond healing, Ayurveda extends its reach to guide individuals in disease prevention and the sustained preservation of health, fostering longevity.

While traditional medicine gains global recognition, Ayurveda faced historical criticism for its perceived ambiguity and philosophical concepts, often deemed challenging for researchers and modern medicine practitioners to grasp. This skepticism has contributed to a diminished interest in Ayurveda, preventing the world from benefiting fully from the potential advantages offered by traditional healthcare practices conducive to an enhanced quality of life. As the global perspective on traditional medicine evolves, there is an increasing recognition of the valuable contributions Ayurveda can make to overall well-being.

The extract of the herbs of **Liv Muztang Capsule** is a very ancient Ayurvedic preparation which is commonly used for Vijikarak Karama (Aphrodisiac). This Article refers at **Liv Muztang Capsule**, its use, method of preparation, characteristic, probable mode of action

and recent works on **Liv Muztang Capsule**. The process of **Liv Muztang Capsule** preparation is repeated ten times to obtain finally prepared drug. Thus it may be an ancient example of potentization. **Liv Muztang Capsule** 16 potent herbs which mentioned in Ayurvedic texts and other Metria Medica. It strengthens the muscles and improves the capacity of livingness, Mood promoter increase Libido. All herbs helps in treating Erectile Dysfunction, Loss of Libido, Loss of Energy (fatigue) and acts as Balya & Rasayana in healthy volunteers.

According Acharya Charak

VAJIKARANA

In Sanskrit, the term "Vaji" signifies a horse, symbolizing sexual potency and performance. Consequently, Vajikarana (Aphrodisiac) aims to instill in an individual the vigor akin to that of a horse, specifically emphasizing the animal's notable capacity for sexual activity. While the term "Vajikaran" (Aphrodisiac) does not precisely translate to aphrodisiac in its literal sense, its contemporary connotation aligns with the same meaning.^[7] By proper use of these formulations, one becomes endowed with good physique, potency, strength, complexion and sexually exhilarated and potent like an 8-year-old horse.^[8]

The individual seeking pleasure is advised to regularly engage in Vajikaran, or vilification therapy. Vajikarana (Aphrodisiac) not only provides satisfaction but also offers nourishment, the continuity of progeny, and profound happiness. Described as the means by which a man attains the capability for robust sexual intercourse, akin to a powerful horse, Vajikarana (Aphrodisiac) endears him to women while nourishing his body. It is hailed as the optimal promoter of strength and vigor.^[9]

While the primary goal of Vajikarana (Aphrodisiac) is successful copulation for healthy reproduction, the ancillary benefit of sexual pleasure positions it as a component of 'eugeney.' This therapeutic approach also finds application in various sexual and reproductive disorders such as Klaibya or Erectile dysfunction, Bandhyatva or Infertility, Shukraghata Vata or azoospermia, and premature ejaculation.^[5,10]

Vajikarana (Aphrodisiac) chikitsa necessitates strict adherence to the guidelines outlined in Ayurvedic classics. The process involves diverse methods of shodhan (body cleansing) through vaman (emesis), virechan (purgation), and swedan (sweating). Post-Shodhan therapy, tailored herbal and herbo-mineral combinations are administered based on the individual's

doshic body constitution as per the Tridosha theory. Additional components of the therapy focus on enhancing overall health and pleasure, including activities such as massaging with medicated herbal oils, herbal baths, wearing fragrant garlands, anointing the body with fragrant herbal pastes, and indulging in music, among others.

AIMS AND OBJECTIVE

The present work was undertaken with the following aims and objectives

Conceptual and hypothetical evaluation of (Erectile Dysfunction, Loss of Libido, Loss of Energy (fatigue) and acting as Vajikarak Balya & Rasayana).

Clinical evaluation of an Ayurvedic compound “ **Liv Muztang Capsules** ” in the management of Erectile Dysfunction, Loss of Libido, Loss of Energy (fatigue) and acting as Balya & Rasayana.

MATERIAL AND METHODS

Selection of Cases : Patients with *Klaibya* (Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue) selected randomly from OPD of P.G Department of Rasa Shastra at Shri Krishna Govt Ayurvedic College Kurukshetra and its action as Vajikarak Balya & Rasayana.

Age Group

60 Individual from the age group of 35 to 55 Years were taken for Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue).

Selection of healthy volunteers

The observational clinical trial took place from 2023 October to December 2023 at OPD of P.G Department of Rasa Shastra at Shri Krishna Govt Ayurvedic College Kurukshetra.

The trial design involved the enrolment of healthy volunteers aged between 35 to 55 Years without consideration of their religious affiliation, income level, or occupation. Initially, a total of 100 volunteers were screened for primary eligibility, but 40 individuals were subsequently excluded for various reasons.

Ultimately, 60 volunteers were selected for the this trial and were randomly assigned to one group: that receiving **Liv Muztang Capsules** for the treatment of Erectile Dysfunction, Loss of Libido, Loss of Energy (fatigue). Eligibility for participation in the study was determined by specific inclusion and exclusion criteria.

Inclusion criteria

Male married patients suffering from ED with or without DM.

Inclusion criteria involved clinically assessed healthy male volunteers aged between 35 to 55 Years, irrespective of their religious beliefs and income status.

These participants were required to be free from chronic, organic, or severe diseases and should not be taking any supplements or vitamins.

Exclusion criteria

1. Age below 35 years and above 55 years.
2. Unmarried patients
3. Patients suffering from sexually transmitted diseases, carcinoma, acquired immunodeficiency syndrome, tuberculosis, congenital abnormalities of genital organs, other disease like phimosis, ulceration, hydrocele, spinal cord lesions, etc.

Investigations

- Routine haematological investigations: Haemoglobin %, Total Leucocyte count, Differential Leucocyte count, Erythrocyte Sedimentation Rate.
- Biochemical investigations: Fasting Blood Sugar, Post Prandial Blood Sugar, lipid profile, blood urea, serum creatinine.
- Urine for routine and microscopic examination.
- Semen analysis.
- Bio markers: serum testosterone, serum Dehydroepiandrosterone Sulfate (DHEA-S)

Assessment criteria: Effect of the therapy will be assessed on the basis of improved status in **Erectile Dysfunction, Loss of Libido, Loss of Energy (fatigue).**

DRUG DOSE DURATION

General contents of **Liv Muztang Capsules** are mentioned below

Sr. No.	Herb	Botanical Name	Part Used	Extract	Quantity
1.	Shilajit	Asphaltum	Resin/Exudate	Extract	50 mg
2.	Gokhura	Tribulus terrestris	Fruit/Seed	Extract	30 mg
3.	Satavari	Asparagus racemosus	Root	Extract	30 mg
4.	Kaunch	Mucuna pruriens	Seed	Extract	50 mg
5.	Javitiri	Dioscorea bulbifera	Tuber/Rhizome	Extract	25 mg

6.	Akarkara	Anacyclus pyrethrum	Root	Extract	40 mg
7.	Kesar	Crocus sativus	Stigma	Extract	25 mg
8.	Bichhua Patti	Trichosanthes kirilowii	Leaf	Extract	1 mg
9.	Ashwagandha	Withania somnifera	Root	Extract	39 mg
10.	Safed Musli	Chlorophytum borivillianum	Tuber/Rhizome	Extract	30 mg
11.	Munjataka	Sphaeranthus indicus	Flower	Extract	40 mg
12.	Chincha Seed	Tamarindus indica	Seed	Extract	45 mg
13.	Lavang	Syzygium aromaticum	Bud/Clove	Extract	20 mg
14.	Mulondo	Mondia whitei	Root	Extract	30 mg
15.	Horny Goat Weed	Epimedium species	Aerial Parts	Extract	30 mg
16.	Sudh Kuchla	Strychnos nux-vomica	Seed	Extract	15 mg

The Liv Muztang Capsule is Ayurvedic Patent Medicine Duly Approved by AYUSH department of Uttar Pradesh and prepared in the R n' D Lab of K. VEDIYAS, Site -IV industrial Area, Sahibabad, Gaziabad (UP) bearing Manufacturing Licence LA 4982/2022 and Marketed by **SAT KARTAR SHOPPING LTD, 603 mercantile House , KG Marg New Delhi- 110001.**

Liv Muztang Capsule possess the quality to penetrate the deeper tissues. The idea behind this is to use minute alkaloids which has a quality to penetrate the Sukshma Srotas i.e. most fine channels. Here are the properties of the mentioned herbs as useful in upper respiratory tract infections, according to the Bhav Prakash Nighantu and Materia Medica.

1. Shilajit

- a. **Adaptogenic:** Enhances the body's ability to cope with stress.
- b. **Rejuvenative (Rasayana):** Supports overall vitality.
- c. **Aphrodisiac:** Known for its potential to improve sexual function.

2. Gokhura

- a. **Aphrodisiac:** Enhances libido and sexual performance.
- b. **Diuretic:** Supports urinary health.

3. Satavari

- a. **Galactagogue:** Supports reproductive health.
- b. **Rejuvenative (Rasayana):** Promotes overall vitality.

4. Kaunch

- a. **Aphrodisiac:** Known for its positive effects on sexual health.

- b. **Nervine Tonic:** Nourishes and strengthens the nervous system.

5. Javitiri

- a. **Aphrodisiac:** Traditional use for improving sexual health.

6. Akarkara

- a. **Aphrodisiac:** Enhances libido and sexual function.
- b. **Stimulant:** May promote increased energy.

7. Kesar

- a. **Aphrodisiac:** Traditionally used to improve sexual function.
- b. **Antioxidant:** Supports overall health and vitality.

8. Bichhua Patti

- a. **Traditional Use:** May have properties beneficial for reproductive health.

9. Ashwagandha

- a. **Adaptogenic:** Helps the body adapt to stress.
- b. **Rejuvenative (Rasayana):** Promotes vitality and longevity.
- c. **Aphrodisiac:** Known to enhance sexual potency and desire.

10. Safed Musli

- a. **Aphrodisiac:** Enhances libido and sexual function.
- b. **Galactagogue:** Supports reproductive health.

11. Munjataka

- a. **Aphrodisiac:** Traditional use for improving sexual health.

12. Chinch Seed

- a. **Traditional Use:** May have properties beneficial for reproductive health.

13. Lavang

- a. **Aphrodisiac:** Traditionally used to improve sexual health.

14. Mulondo

- a. **Aphrodisiac:** Traditional use for improving sexual health.

15. Horny Goat Weed

- a. **Aphrodisiac:** Commonly used to enhance libido.
- b. **PDE-5 Inhibitor:** Similar mechanism to pharmaceuticals used for erectile dysfunction.

16. Sudh Kuchla

- a. **Traditional Use:** Historical application for sexual health.

Conceptual and hypothetical evaluation of Klaibya or Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue), Rasayan and Vajikaran.

Properties of Liv Muztang Capsule: Regular practice of Liv Muztang Capsule regains the sharpness of the sense-organ. It strengthens and rebuild the muscles, it increase the Libido, Energy in the Body and act as Rasayana, Vajikaran in the Body.

PROPOSED MECHANISM OF ACTIONS

Vajikarana (Aphrodisia) therapy is believed to rejuvenate all seven dhatus (body elements), thereby restoring balance and promoting overall health. Within the framework of Ayurvedic principles, Vajikarana (Aphrodisia) emerges as a viable solution for addressing defects in the shukra (sperm and ovum), contributing to the potential for a healthy progeny. Despite its potential benefits, there is a scarcity of experimental studies on Vajikarana (Aphrodisiac) therapy, and existing research often lacks scientific rigor.

Rasayan drugs operate within the human body by modulating the neuro-endocrino-immune system. Among these, Vaajikara, Rasayan constitutes a distinct category specifically designed to enhance the reproductive system and boost sexual function. These Rasayans exert their influence on higher brain centers, such as the hypothalamus and limbic system. Additionally, Vajikarana (Aphrodisiac) claims to possess anti-stress and adaptogenic properties, playing a role in alleviating anxiety related to sexual desire and performance.

In a study conducted by Chauhan et al. in 2010, it was demonstrated that the administration of Vajikaran rasayana, including extracts from Gokhura, Satavari, Kaunch, Javitiri, Akarkara, Kesar, Bichhua Patti, Ashwagandha, Safed Musli, Munjataka, had a modulating effect on the levels of pituitary hormones FSH and LH. This modulation may provide insights into the positive impact of these herbs on sexual functioning. Further research is warranted to

substantiate the claims and explore the comprehensive mechanisms underlying the therapeutic effects of Vajikarana (Aphrodisia) therapy.^[11]

Statistical analysis

The statistical analysis of data gathered from the two treatment groups at various study intervals was conducted through paired Student's 't-test'.

RESULT

Initially, subjects who examined properly in the OPD and biochemistry examination were done. Furthermore, they were required to meet all other inclusion criteria. During the initial screening process, fasting glucose, renal indicators including serum urea and creatinine, hepatic indicators such as ALT and AST, haematological parameters, and stool investigations were all found to fall within the normal range, which was a prerequisite for the inclusion of volunteers. Clinical assessment of **Liv Muztang Capsules** in Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue).

Furthermore, the study revealed a significant ($P < 0.001$) improvement in Erectile Dysfunction (+62.0 %), Loss of Libido (+61.4%), Loss of Energy (fatigue) (30.4% to 34.4% after varying time intervals).

The study revealed a significant ($P < 0.001$) improvement in Volume of Semen.

The study revealed a significant ($P < 0.001$) improvement in Viscosity of Semen.

This improvement was concurrent with a reduction in Fasting Blood Sugar, Post Prandial Blood Sugar, lipid profile, blood urea, serum creatinine after a 30 - day regimen of **Liv Muztang Capsules** at a dosage of 1-2 capsules taken orally twice daily.

The subjects' overall health status was confirmed by evaluating various hematological and biochemical parameters, which included fasting glucose, serum urea, creatinine, ALT, AST, Hb% (hemoglobin percentage), total RBC (red blood cell) count, total and differential counts of WBC (white blood cells), RBC/WBC morphology and ESR (erythrocyte sedimentation rate).

Treatment efficacy

40 subjects opted to discontinue their participation in the study for various reasons and at different stages. Consequently, the data from these subjects were excluded from the calculations."

Discussion is Vataghna, Bruhana and Snehan. It is sukshma srtotogami. Profuse energy or Bala increases after administration of **Liv Muztang Capsules**. **Liv Muztang Capsules** firstly mobilises the Kaphadi doshas from these sthanas and then it acts there as Bruhana, Balya and vajikarak.

Medicine reaches to minute channels and remove all the doshas. The Sneha reaches in the srotasas, It cures prevent premature ejaculations also while keeping the mind calm. Regular practice of **Liv Muztang Capsules** helps avail this benefits Viajikarak Dravyas and cures Erectile dysfunctions.

Regular use of **Liv Muztang Capsules** liquefies the Doshas, extract them from the site without destructing it and ultimately improves efficiency of Indriya and muscles become Strong. **Liv Muztang Capsules** finds its roots in Ayurveda, the ancient system of Indian medicine, where it serves as a remedy for a variety of ailments, notably chronic conditions. The ingredients of **Liv Muztang Capsules** has retained its significance within the annals of Ayurvedic Materia Medica (Bhav Prakash Nighantu) and Ayurvedic Pharmacopeia of India to harness its potential for a wide spectrum of maladies.

The use of **Liv Muztang Capsules** for the treatment of Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue) stands with a significant

When administered chronically, **Liv Muztang Capsules** was established as safe within the dosage range of 1-2 capsules every Day.

DISSCUSION

The *Guru Guna* has been mentioned as one among the six qualities of *Vrishya Dravya* by *Charaka* (Cha. Chi. 2/4/36). The aphrodisiac effect of ingredients of **Liv Muztang** is also described in the texts. The better effect on ejaculation score may be because of *Stambhaka* effect due to its *Shita Guna* and *Kashaya Rasa*. This acts as *Shukra Stambhana* (Treatment of Premature ejaculation). The results found in orgasm and performance anxiety score may be due to its *Shita Virya*, cooling property and because of good performance by improvement in erection and ejaculation and by psychological

counseling. The effect on post-act exhaustion may be due to the *Guru Guna* and *Balya* property of the test drug. Improvement on self and partner's satisfaction after intercourse may be because of improvement in erection, rigidity and the time of ejaculation. The percentage-wise improvement in serum testosterone and serum DHEA-S may be due to its *Shukra Vriddhikara Vrishya* properties of the Ingredients of **Liv Muztang Capsules**, as these male androgens are being correlated with *Sarva Shariragata Shukra*.

However, these results were statistically insignificant. Here, *Guru* and *Shita Guna* are similar to the properties of *Shukra* (Cha. Chi. 2/4/50). Here, the *Shukra Vriddhikara Vrishya* effect due to its *Guru Guna* and *Shita Virya* might have increased the sperm count. **Liv Muztang capsule** had caused mild increase in serum testosterone and DHEA-S levels, and testosterone stimulates sertoli cells to secrete paracrine agents that stimulate sperm proliferation and differentiation.

CONCLUSION

Vajikarana (Aphrodisia) stands as a significant therapeutic approach in Ayurveda, offering a range of potential benefits such as enhanced sexual capacity, the promotion of future progeny's health, and the treatment of prevalent sexual disorders like infertility, erectile dysfunction, and premature ejaculation. Despite these potential advantages, the contrasting philosophical foundations of Ayurvedic science and modern medicine pose challenges to effective collaboration between researchers and practitioners in these fields. A notable critique of Vajikarana (Aphrodisia) is the lack of research conducted according to contemporary scientific standards. The absence of standardized formulations and difficulties in obtaining unadulterated herbs present practical challenges in the practical application of Vajikarana (Aphrodisia) preparations.

To bridge these gaps, conducting randomized controlled trials on these formulations could offer valuable insights into their efficacy, potential side effects, and other treatment-related parameters.

A survey study indicates that Erectile Dysfunction (ED) is more prevalent in individuals with Diabetes Mellitus (DM), and its severity tends to escalate with the progression of age and chronicity of the disease. The impact of socioenvironmental factors, such as strained relationships, adverse life experiences, significant financial crises, bereavement, and

psychological stress, is noteworthy as these can contribute to psychogenic ED by influencing the mind.

Notably, the challenge of treating ED in diabetic individuals appears to be more formidable compared to cases in non-diabetic subjects. In a study involving Ashvattha, there was a substantial increase observed in both total sperm count and total motility among non-diabetic subjects. This positions Ashvattha as a noteworthy addition to the category of Shukra Vriddhikara Vrishya drugs, indicating its potential use in the treatment of Oligoasthenozoospermia.

Based on the obtained results, it can be inferred that Liv Muztang Capsules significantly enhanced relief to patients dealing with ED (Klaibya). This suggests its promising role in improving reproductive health and addressing associated concerns.

The analytical and observational clinical evaluation of **Liv Muztang Capsules** on Erectile Dysfunction, Loss of Libido and Loss of Energy (fatigue), has provided encouraging results. This Ayurvedic remedy, with its natural and time-tested ingredients, demonstrated effectiveness in providing symptomatic relief to healthy volunteers, with no reported adverse side effects.

While further research is warranted to establish the broader efficacy of **Liv Muztang Capsules** in a larger population, this study serves as a promising step in exploring alternative approaches to address Sexual life, Longevity, Energy and Libido. **Liv Muztang Capsules** offers a natural remedy option for those seeking relief from the discomforts associated with Erectile Dysfunction and Energy loss.

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