THERAPEUTIC RESPONSE OF UNANI MEDICINE IN THE

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ABSTRACT

Introduction:

In men, the Inability to achieve or maintain an erection sufficient for satisfactory sexual function is known as Erectile Dysfunction (ED). It is a common condition affecting approximately 1 in 5 men over the age of 40. Moreover, it is a treatable condition that can significantly impact the well-being of men and their partners. The common causes of this condition are mainly associated with the impairment of vascular and neurological components of the human body. Men who have a problem with their sexual performance may be reluctant to talk to their doctor, seeing it as an embarrassing issue. However, modern medicine has revealed numerous medical and psychological explanations for erectile dysfunction, including the possibility of serious underlying conditions.It is important to address the line of treatment to give the strength to vital organs along with *muqawwiebah*, *muqawwi e Asaab*, and *muqawwi e Aza e Ra'eesa* drugs, which are available in Unani medicine.

Aim and Objectives:

The study aimed to provide holistic relief to participants suffering from Erectile Dysfunction and to provide affordable, natural, and safe medicine for all socio-economicstatuses.

Material and Method: The study was designed as a case control study with a randomizedsingle-blind blind with a sample size of 40 participants who were randomly allotted into two groups, A & B, with 20 participants in each.The drugs selected for the study in group A are*AqarQarha, Tukm e Pyaz, Tukm e Sarwali, Mochras, Alsee*, and *Zanjabeel*. These Unani drugs were given in *suffof*(powder) form orally with a dosage of 5gms morning and evening after food with milk. The drugs selected for the study in group B were *Jarjeer* (Taramira), *Naaspal* (*Post-Anar*), and *AqarQarha*. The duration of the treatment in both groups is 90 days. All the results were analyzed according to the relevant statistical test.

Results and Discussion: During the study, group A casesshowed 70 % excellent response and 30% showedgood response, whereas in group B cases, 30% were noted with Excellent response50% with good response, and 20% is Satisfactory response.During the study the semen analysis of group A cases revealed that before treatment almost all the cases found with less sperm count, quantity and non-motility of sperms, Decrease Erection, and after the treatment almost 70 % Excellent response and 30 % has shown Good response and whereas the group B cases were noted with Decrease Erection, and after the compilation of treatment cases 30 % were noted with Excellent response and 50% with Good response and 20% is satisfactory response.

Conclusion: On the basis of the above result and discussion, it can be concluded that the drugs of Groups A and B produced a significant effect in the treatment of erectile dysfunction. However, the biological mechanisms through which the Group A and B drugs reduce the clinical features still remain unclear and need to be validated with experimental and clinical studies.

Key words: Unani, Erectile Dysfunction, Zoaf e Istadgi,AqarQarha, Tila.

Introduction

Infertility is the condition when conception does not take place even after one year of regular unprotected sexual intercourse.Approximately 10-25% of couples of reproductive age meet this definition of infertility.Our old physicians say that only 12-25% males are responsible for sterility,but the modern physicians say both are equally responsible for sterility.Erectile Dysfunction is the inability to achieve or maintain an erection or intercourse, difficult or impossible.Erectile Dysfunction is defined as the consistent inability to attain or maintain a sufficiently rigid penile erection for sexual performance.

The inability to get and keep an erection is known as erectile dysfunction. Lack of libido may occur in conjunction with or apart from it. A number of factors can contribute to ED, which might be psychological, neurogenic, vascular, endocrine, or drug-related [1].Erectile Dysfunction is inability to recurrent inability to achieve an erection, the inability to maintain an adequate erection. The common causes of ED are reduced libido: hypogonadism, depression, and, with intact libido, psychological problems including anxiety, vascular insufficiency, neuropathic causes, and drugs [2].

It may occur together or separately with a lack of libido. The most common causes of Erectile Dysfunction are vascular, neuropathic, and psychological. This is a problem with sexual arousal. ED can be defined as the difficulty in achieving or maintaining an erection sufficient for sexual activity or penetration, at least 50% of the time, for a period of six months. It results in significant psychological, social, and physical morbidity and annihilates his essence of masculinity[3].

According to the WHO, Erectile Dysfunction is a common medical problem affecting approximately 15% of men each year. Over 150 million men worldwide were estimated to have been affected by erectile dysfunction. Erectile Dysfunction may have a physiological or psychological basis, but the most common cause is thought to be related to vascular abnormalities of the penile blood supply and erectile tissue, often associated with cardiovascular diseases and their risk factors [4].

Unani medicine has a holistic approach towards the diagnosis and treatment of sexual dysfunction that is not just confined to inability to perform sex, rather includes loss of libido, erectile dysfunction, ejaculatory insufficiency, an orgasmic state, excessive nocturnal emissions, and even infertility in males, which may be due to *Zofe Bah* (sexual dysfunction) or *Nuqse Mani* (seminal defects). It also distinguishes between sexual inadequacy and seminal inadequacy [5,6,7].

According to the Unani system of medicine, health is a state of the body in which there is equilibrium in humors and functions of the body. To maintain the correct humoral balance, there is a power of self-preservationcalled “QuwwateMudabbire Badan” (Immunity of body) in the body. Therefore,the Unani physician aims to find out the cause of the underlying disruption of humors, so that it can be corrected and the disease can be cured.

The erectile function in a normal person is only possible when the definition of a sound mind in a sound body is fulfilled. There are two basic criteria to be fulfilled while dealing with the

physiology of sexual activity. A sound mind takes dominance over the sound body, maintaining the sexual function. The ancient Unani physicians recognized the importance of a sound mind in sexual activity. This leads to the conceptual differentiation of sexual debility (Zoafebah) into two groups.*ZoafeBah Asli*, also called *ZoafeBahHaqeeqi*, *ZoafeBah Shirki*, also called *ZoafeBahGair Haqeeqi*. *ZoafeBah Asli* or *Zoafebah Haqeeqi*: In *ZoafeBah Asli*, the sexual debility is due to dysfunction in the organs of sex,whichmakesan increasing circulatory deficiency of the penis, resulting in loss of blood supply to the organ or some local disease in the organ. Congenital deformities like Hypospidius, Short penis, stricture, and elongatedfrenium penis result indefectsin the erection of the penis [5,6,7].

ZoafeBah Shirki or *Zoafebah GairHaqeeqi*: In this category, the sexual organs are well developed, no local disease or disorder in the organs, but the sexual debility is affected due to disease of other organs,e.g., Heart, brain, liver, blood disorder, etc.Psychological derangement affects the sound of mind,resulting in defects in sexual activity. It is the basic principle of Unani medicine regarding sexual disorders that the physiological variations,such as stress, depression, happiness, etc.,affect sexual activity.

This is a problem with sexual arousal. ED can be defined as the difficulty in achieving or maintaining an erection sufficient for sexual activity or penetration, at least 50% of the time, for a period of six months. It results in significant psychological, social, and physical morbidity and annihilates his essence of masculinity [3].

Material and Methods

The study was designed as a Randomized Single-Blind comparative clinical trial, and the sample size was determined as 40 participants. After obtaining clearance from the institutional ethical committee, " Therapeutic Response of Unani Medicine in the Management of *Zaof e Istadgi (Nauooz)* (Erectile Dysfunction)" was carried out at the Govt. NizamiaTibbi College and Hospital, Charminar, Hyderabad, during 2016-2019, and the participants with Zaof e *Istadgi (Nauooz)* (Erectile Dysfunction) were selected from Out Outpatient Department based on clinical signs and symptoms, history, clinical examination, routine investigations (CBP, CUE, RBS, Semen Analysis,Sr. Testosterone),and randomly divided into two Groups A and Group B. After taking their informed consent, they were included in the trial. Participants who fulfill inclusion criteria such as Male age 30 to 55 years of age, Participants with the sense of dejection and shyness, Fear psychosis, Weakness of the nerves, Reduced spermcount, Diabetic mellitus were included in the study and who didn't fulfill inclusion criteria such as suffering from systemic and dreadful diseases, Congenital disorder related with reproductive system, Suffering from venereal diseases, CAD, Age below 30 and above 55years, Genetic defects, Accessory sex gland infection, Hypertension, and mentally challenged participantswere excluded from the study.

The duration of treatment was 90 days. All follow-ups were done on every two weeks. The subjective (Trouble getting Erection, Shyness, Fear and objective (Sexual Health Inventory for Men (SHIM), Arbitrary Scoring of the Symptoms) parameters were assessed at each follow-up as 0^{th} day, 15^{th} day, 30^{th} day, 45^{th} day, 60^{th} day, 75^{th} day, and 90^{th} day for the diagnosis and evaluation of the efficacy of the drugs. No concomitant treatment was

allowed.The efficacy of treatment of both groups was assessed based on subjective and objective parameters,the Sexual Health Inventory for Men (SHIM), and the Arbitrary Scoring of the Symptoms. No concomitant treatment was allowed.

List of Ingredients and Method of Preparation of Group - A Formula (*Safoof*);

S. No	Unani Name	English Name	Scientific Name	Quantity
1	*AqarQarha*	Spanish Pellitory / Spanish Chamomile	*Anacyclus pyrethrum* DC.	800 mg
2	*Tukm e Pyaz*	Onion	*Allium cepa*	1000mg
3	*Tukm e Sarwali*	French marigold	*Targetescatula*	800 mg
4	*Mochras*	silk-cotton	*Bombax ceiba Linn.*	800 mg
5	*Alsee*	Linseed	*Linumusitatissimum*	800 mg
6	*Zanjabeel*	Ginger	*Zingiber officinalis*	800 mg

The above drugs were cleaned by weeding out unwanted material and impurities. Then all the ingredients were powdered and packed in sachets weighing 5 g each. 5 gm twice a day with milk after meals was given orally to the participants for 90 days.

List of Ingredients and Method of Preparation of Group-B Formula.

S. No	Unani Name	English Name	Scientific Name	**Quantity**
1	*Jarjeer(Taramira)*	Eruca/Arugula	*Eruca sativa Linn.*	125mg
2	*Naaspal (Post-Anar)*	Pomengranate	*Punica granatum*	1 Tola/10gm
3	*AqarQarha*	Spanish Pellitory / Spanish Chamomile	*Anacyclus pyrethrum DC.*	2 Tola/20gm

The above drugs were cleaned by removing unwanted materials and impurities. Then they were mixed and made Tila (Local Application). 2 Ratti of this Tila was locally applied on the penis completely once a day.

Results

The observations and results concerning demography, clinical symptoms, signs, and SHIM scores obtained from the trial have been illustrated in tables and graphs. They are discussed in the following paragraphs consecutively to show the efficacy of the group A and B formulas separately.As it is evident from Table 1, the highest no of participants observed in the age group of 35 - 45 years, i.e., 31 cases (77.5%), and the age group. Table 2 shows that the socio-economic status is a concern for participants from the lower middle class,more than21 cases (52.5%). In this study, Erectile Dysfunction is more common among skilled workerswith15 cases (37.5 %), followed by unskilled workerswith 11 cases (27.5%), as is evident in Table 3. As it is evident from Table 4, the highest number of non-vegetarians were affected, as 38 cases (95%), followed by 02 cases (5%) of vegetarians. In this study, the

association of Erectile Dysfunction with diabetes mellitus is evidenced as 28 cases (70%) were non diabetic,followed by 12 cases (30%) were diabetic participants,asshown in Table 5. Table 6 shows that the temperament of the participants was assessed based on *AjnaseAshra*, and it was recorded that 19 cases (47.5%) were *balghamimizaj*participants,followed by 15 cases (37.5%) were *safravimizaj*participants,whereas 06 cases (15%) were *sawdavi*participants.

Table 1: Incidence in Different Ages

Age in Years	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
30-35	7	35.0	4	20.0
36-40	4	20.0	7	35.0
41-45	4	20.0	5	25.0
46-50	2	10.0	1	5.0
51-55	3	15.0	3	15.0
Total	20	100.0	20	100.0

Table 2: Distribution of participants according to Socio-Economic Status

Socio-Economic Status	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
Upper Class (UC)	0	0.0	0	0.0
Upper Middle (UM)	4	20.0	4	20.0
Lower Middle (LM)	11	55.0	10	50.0
Upper Lower (UL)	3	15.0	4	20.0
Lower(L)	2	10.0	2	10.0
Total	20	100.0	20	100.0

Table 3: Distribution of participantsaccording to Occupation

Occupation	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
Skilled worker	5	25.0	10	50.0
Unskilled worker	4	20.0	7	35.0

Professional	3	15.0	2	10.0
Business man	8	40.0	1	5.0
Total	20	100.0	20	100.0

Table 4: Distribution According to Diet

Diet	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
Non-Veg	18	90.0	20	100.0
Vegetarian	2	10.0	0	0.0
Total	20	100.0	20	100.0

Table 5: Distribution According to Diabetes Mellitus

Family History	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
Present	5	25.0	7	35.0
Absent	15	75.0	13	65.0
Total	20	100.0	20	100.0

Table 6: Distribution According to *Mizaj*

Mizaj	Group A		Group B	
	No. of Participants	Percentage	No. of Participants	Percentage
Damavi	0	0.0	0	0.0
Balghami	10	50.0	9	45.0
Safravi	6	30.0	9	45.0
Sawdavi	4	20.0	2	10.0
Total	20	100.0	20	100.0

Table 7: Showing the reduction of symptoms at different follow-ups in Group Aand B participants

Parameter	Severity	**Base-line**	**15th day**	**30th day**	**45th day**	**60th day**
Trouble getting an Erection **GroupA**	3+	6	5	-	-	-
	2+	11	11	6	1	-
	1+	3	4	11	6	6

	Absent	-	-	3	13	14
	Total	**20**	**20**	**20**	**20**	**20**
Trouble getting an Erection **Group B**	3+	9	9	3	-	-
	2+	11	9	7	8	4
	1+	-	2	10	6	10
	Absent	-	-	-	6	6
	Total	**20**	**20**	**20**	**20**	**20**

Table 8: Showing remission of the Shim scale after treatment in both Groups

Acc to	Before treatment	After treatment	t-test	p-value
Group-A	12.6 ±4.3	21.9 ±2.9	15.485	<0.00001
Group-B	10.8 ±3.3	19.1 ±3.6	10.751	<0.00001

Table 9: Showing therapeutic response in Group A and Group Bparticipants

Response	Group-A		Group-B	
	No. of cases	Percentage	No. of cases	Percentage
Excellent	14	70.0	6	30.0
Good response	6	30.0	10	50.0
Satisfactory response	0	0.0	4	20.0
Total	20	100.0	20	100.0

Discussion

As it is evident from Table 1, the highest no of participants observed in the age group of 35 - 45 years, i.e., 31 cases (77.5%), and the age group. It shows that the disease is more prevalent in adult personsbelonging to this age group. This supports the findings of [8, 9].

Table 2 shows that the socio-economic status is a concern for participants from the lower middle class,more than21 cases (52.5%). According to the above distribution, Erectile Dysfunction may be more prevalent in lower-middle-class males thanupper-class males. This supports the findings of [10, 11].

In this study, Erectile Dysfunction is more common among skilled workers,with15 cases (37.5 %), followed by unskilled workerswith 11 cases (27.5%), as is evident in Table 3. This supports the findings of [12, 13]. As it is evident from Table 4, the highest number of non-vegetarians were affected, as 38 cases (95%), followed by 02 cases (5%) of vegetarians.

In this study, the association of Erectile Dysfunction with diabetes mellitus is evidenced as 28 cases (70%) were non diabetic,followed by 12 cases (30%) were diabetic participants,asshown in Table 5. Men with DM are at a significantly higher risk of ED than those without DM. In line with this, Corona et al. reported a 19.4%, 15.4%, 10.4% and 21.6%

prevalence of mild, mild-to-moderate, moderate, and severe ED in men with DM, respectively [14].The severity of ED is highly dependent on the type and duration of DM, the type of treatment, and comorbidities [15, 16, 17].

A study conducted by Fedele et al. on a large population of men with DM showed a 26% and 37% prevalence of ED among those with type 1 DM (T1DM) and type 2 DM (T2DM), respectively.This supports the findings of [18]. Table 6 shows that the temperament of the participants was assessed based on Ajnas-e-Ashra, and it was recorded that 19 cases (47.5%) were *balghamimizaj*participants, followed by 15 cases (37.5%) were *safravimizaj*participants,whereas 06 cases (15%) were *sawdavi*participants. According to the Unani system of medicine, the pathogenesis of most diseases is described in terms of temperament and humour. The diseases of phlegmatic temperament mainly occur in those organs and persons who have having phlegmatic temperament physiologically. With this observation, it can be concluded that subjects with *balghamimizaj* were more prone to have *balghami*ailments like erectile dysfunction. Lack of physical activity was a strong independent risk factor for erectile dysfunction,which most common nature of the *balhgami* individuals. This supports the findings of [19, 20]

The efficacy of group A and group B drugs was assessed based on improvements in typical clinical symptoms and signs of obesity. At the end of the study, there weresignificant improvements in these symptoms in both groups A and B.

To assess the results of the study, the data of 40 participantswere observed and statistically analyzed. The level of significance was set at 5% (p = 0.05), and the differences between the mean Erectile Dysfunction were p<0.00001and p<0.00001,denote results as highly significant. Whereas p>0.05 denotes results as not significant.The t-test value of erectile function ofgroup A is 15.485, whereas that of group B are respectively 10.751. The graph shows the response of Group A drugs to erectile dysfunction, and their P value is <0.00001, respectively. This shows that the result is significant. The graph shows the response of Group B drugs to erectile dysfunction, and their P value is <0.00001, respectively. This shows that the result is significant. No recurrence or exacerbation was reported by any patient after the completion of the trial. No patient reported any adverse events throughout the study or after 90 days of follow-up. As the study was done for a limited duration with a small group of participants, further research needs to be carried out in this aspect. Hence, further elaborate studies are awaited in this context with a large sample size for a better drug combination. The therapeutic response of group A showed that out of 20 (100%) participants, 14 (70%) got an excellent response, 06 (30%) got a good response, 0 (0%) got a satisfactory response, and 0 (0%) got a poor response. In group B (control), 20 participants, out of whom06 (30%) got an excellent response, 10 (50%) got a good response, 04 (20%) got a satisfactory response, and 0 (0%) got a poor response.

Itisevidentfromtheabove-described observationsthatGroupAmedicines are more effective than Group B. Erectile Dysfunction improved in both groups. It is concluded that the efficacy of both Unani formulations on Erectile Dysfunction was found clinically and statistically significant; both groups are safe and effective in the management of erectile dysfunction.

Based onthe above result and discussion, it can be concluded that the drugs of Groups A and B produced a significant effect in the treatment of erectile dysfunction. However, the biological mechanisms through which the Group A and B drugs reduce the clinical features still remain unclear and need to be validated with experimental and clinical studies.

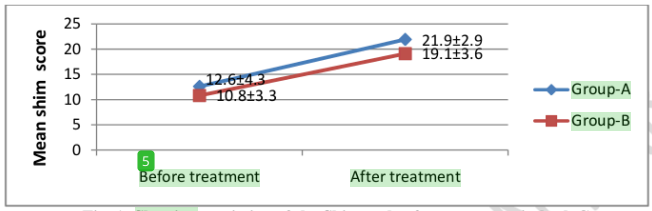

Fig. 1: Showing remission of the Shim scale after treatment in both Groups

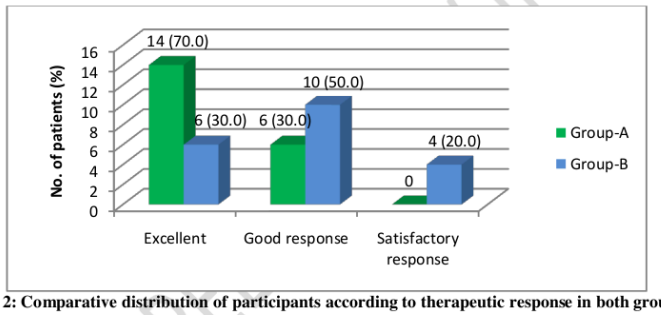

Fig. 2: Comparative distribution of participants according to therapeutic response in both groups

The effectiveness of the ingredients of the group A and B drugs on *Zaof e istadgi*was justifiable based on the various studies that support the use ingredients in this study. Unani medicines have many herbs that can improve the functions of vital organs. The Unani pharmacotherapy is based on the correction of abnormal *Mizaj* and providing *Quwwat* to the Reproductive organs to perform their normal function. The following are the actions of drugs used in the management of Erectile Dysfunction accordingly. *Muqawwi e Bah*, *MuqawwieJigar*, *Muqawwi e Aza e Raisa, Moghalliz e Mani*, and *Muqawwi e Aasab*. The supportive findings were as follows:

Male rats' sexual behavior may be enhanced by the *Zingiberofficinale*Rosc. Extracts, particularly at higher doses, could have aphrodisiac benefits. This might be because its bioactive ingredients have an impact on the neurological system or hormone levels [21].The ZingiberofficinaleRosc. Contains two major constituents, gingerol and shaghol, which suppress the absorption of dietary fat from the intestines and help in the dissolution of excess fat deposited in the body. Rihana Kamal et. al. stated that these phytochemicals increase the

metabolic rate and thus help to “burn off” excessive fat, which also helps to keep the body active and improve Erectile Dysfunction [22].

The onion group had the highest serum total testosterone level, the lamotrigine group had the highest malondialdehyde (MDA) level, and both the onion and ginger groups had the highest overall antioxidant capacity ($p<0.05$) [23].With a low dosage of 50 mg/kg in albino rats, this study showed that the petroleum extract of Anacyclus pyrethrum alters accessory sexual organ weights, sexual behavior, penile erection, and sexual performance [24].Additional research on Anacyclus pyrethrum revealed that it may increase the frequency of penile erections, mounting and intromissions, and latency instances for these processes, all of which may improve an experimental animal's libido[25].Further, it plays a major role in reducing depression in participants. It also acts as a memory enhancer, and it shows good results in participants with poor memory. Anacyclus pyrethrum possesses therapeutic properties like a nervine stimulant, reducing numbness and pain in the body, which helps to improve the clinical signs and symptoms of diseases like Erectile Dysfunction [26].

Supplementing with flaxseed may have an impact on sex hormones, according to conflicting studies. Our goal was to conduct a meta-analysis and systematic review of randomized controlled trials (RCTs) that looked into how supplementing with flaxseed affected the sex hormone profile. Up until March 2023, searches were conducted using the Web of Science, Embase, Cochrane Library, PubMed, Scopus, and Google Scholar databases. A random-effects model was used to calculate the standardized mean difference (SMD). Standard procedures were used to report publication bias, heterogeneity, and sensitivity analysis. The updated Cochrane risk-of-bias technique for randomized trials, called RoB 2, was used to assess each study's quality. Results from 10 RCTs showed that follicle-stimulating hormone (FSH) was not significantly changed by flaxseed supplementation. Adult sex hormones were not significantly impacted by flaxseed supplementation. However, because of the small number of included trials, this topic remains unexplored and requires additional research in subsequent RCTs [27].

Juice from Bombax ceiba Linn. is regarded as a healing and nourishing tonic. The effects of lyophilized root aqueous extract on male albino rat spermatogenesis and sexual behavior were investigated. In vivo evaluation of five parameters was affected by the administration of 100 mg Kg (-1) body weight of aqueous extract. Serum testosterone level, anabolic effects, epididymal sperm count, seminal fructose level, and sexual behavior analysis in the presence of a female were the criteria assessed.Animals treated with B. ceiba extract showed increases in the weight of their bodies and sexual organs. Significant improvements in mount, intromission, and ejaculation frequencies were observed ($P < 0.05$). Serum testosterone levels also rose; however, this difference was not statistically significant ($P > 0.05$). Significant improvements were also seen in the number of epididymal sperm and the seminal fructose concentration. In addition, the penile erection index was higher than that of the animals in the control group. When compared to the control group, the copulatory rate doubled and the hesitation period was dramatically decreased ($P < 0.01$) in the treated animals [28].

Young root, a plant component of Bombax ceiba L., is used to treat sexual issues. The young root is known as Semalmusli or Semar-kanda. It exhibits action against a variety of sexual issues. It is used to treat impotence, spermatorrhea, and aphrodisia in the traditional medical system. When it comes to sexual stimulation, the plant's juice is used as a nutrient. In the case of oligospermia, the other plant parts, such as the root powder, are employed to boost the motility and sperm count. Bombax ceiba L is used to treat Erectile Dysfunction and other impotence-related issues [29].

Recent years have seen the publication of a comparatively large number of studies that concentrate on the biological effects of the extract from Eruca sativa (ES) leaves on in vitro and in vivo disease models. Analyzing ES's phytochemical components, traditional applications, potential pharmacological effects, and known effects on male reproductive results is the goal of this narrative review. Numerous components with antioxidant qualities, including polyphenols, glucosinolates, flavonoids, and carotenoids, have been found in ES extracts, according to available research. We demonstrate that ES has potential preventative qualities and therapeutic applications based on the chemical and pharmacological features of the aforementioned substances, particularly in the functional abnormalities of the male reproductive system [30].

On the other hand, preclinical in vitro and in vivo studies have clearly shown the effectiveness of pomegranates in modulating key biological processes such as inflammation, hypoxia, and oxidative stress that are significant in the pathophysiology of urological diseases. Clinical trials have also provided more evidence in favour of its application in the management of prostate cancer and other illnesses. Here, we conduct a critical analysis of the scientific literature regarding the present and potential applications of pomegranate extracts in the treatment of prostate cancer, benign prostatic hyperplasia, and Erectile Dysfunction [31].

Following the trial, participants who took LN18178 reported significant ($P < 0.05$) improvements in their erection hardness (EHS) and IIEF-5 (International Index of Erectile Function-5) scores, as well as significant improvements in their total and domain scores on the Derogatis Interview for Sexual Functioning-Self Reporting Male (DISF-SR-M) questionnaire. Significant gains in the general health survey (GHS) and multi-dimensional fatigue inventory (MFI) readings were also found through comparative analysis. When compared to a placebo, LN18178 supplementation significantly ($P < 0.05$) improved the hand-grip strength and six-minute walk distance. The subjects' vital signs, urinalysis, and hemato-biochemical indicators were all within normal limits [32].

Conclusion

In the present study, an attempt is made to treat participants with Erectile Dysfunction with oral Unani drugs to evolve an effective Unani treatment. The response to treatment was defined as an excellent response, a good response, a satisfactory response, ora poor response. Therapeutic response of groups A and B showed that out of 40 participants, 20 (50%) participants got an excellent response, 16 (40%) participants got a good response, 04 (10%) participants got a satisfactory responseto their clinical symptoms and signs, and no

participantswere found in the categories of poor response. It is evidenced that the formulae of both groups have effectiveness in relieving clinical symptoms and signs of erectile dysfunction. It is evident from the above-described observations that group A (test) medicines are more effective than group B (control). Erectile Dysfunction signs & symptoms were improved in both groups. At the end of the study, the statistical significance of the result was noted. It was concluded that the efficacy of Unani formulations on Erectile Dysfunction was found clinically and statistically significant; both groups are safe and effective in the management of erectile dysfunction.Based on the above result and discussion, it can be concluded that the drugs of groups A and B produced a significant effect in the treatment of erectile dysfunction. However, the biological mechanisms through which the test group and control group drugs reduced the clinical symptoms and signs remain unclear and need to be validated with experimental and clinical studies. Theconclusionof thestudyfoundthatp<0.00001, which contradictst h e null hypothesis and shows significance.

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Conflicts of Interest

No conflict of interest.

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