

CASE REPORT

Open Access

Successful Pregnancy by Improving Sperm Parameters Based on Iranian Traditional Medicine (Persian Medicine) – a Case Report

Somaye Mahroozade¹, Elham Akhtari¹, Roshanak Mokaberinejad^{2*}

¹Assistant Professor, Research Institute for Islamic and Complementary Medicine, School of Persian Medicine, Iran University of Medical Sciences, Tehran, Iran

²Assistant Professor, Department of Traditional Medicine, School of Traditional Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Received: 2019-05-13

Accepted: 2019-09-18

ABSTRACT

Background: Treatment of male infertility is an issue in all societies. Abnormalities of sperm parameters constitute almost half of the causes of infertility worldwide. The cause of the disorder is unclear in many cases, and thus male idiopathic infertility is diagnosed for the patient. Medications are usually not very successful in these patients. Therefore, many patients have to resort to assisted reproductive technologies at a high cost. Hence, finding effective therapies for clinicians and researchers is of great value.

Case Presentation: The patient is a 34-year-old man with a two-year history of idiopathic infertility. He had used various drugs to improve sperm parameters, none of which was successful. Finally, after 3 months of using an Iranian Traditional Medicine (ITM) product, *lobub morakab*, the patient had a significant improvement in spermogram parameters and the patient's spouse became pregnant.

Conclusion: ITM offers various treatments and strategies for infertility, one of which is the drug reported in this article. Integrating the rich resources of ITM with assisted reproductive technology can bear good results for patients.

Keywords: Idiopathic Male Infertility, Infertility, Traditional Medicine, *lobub morakab*, case report

Citation: Somaye Mahroozade, Elham Akhtari, Roshanak Mokaberinejad. Successful Pregnancy by Improving Sperm Parameters Based on Iranian Traditional Medicine (Persian Medicine) – a case report. Asian J Trad Com Alt Med, 1(1-2), Winter 2019 16-22.

Corresponding Author:

Roshanak Mokaberinejad, Department of Traditional Medicine, School of Traditional Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Email: Rmokaberi@gmail.com

Introduction

Infertility is defined as couples that attempt to conceive for one year in those younger than 35, and for six months in those older than 35, but do not succeed despite having stopped contraceptive methods [1]. One in every six couples have an infertility problem. There are over one million infertile couples living in Iran [2]. Male infertility factors can be acquired, congenital, and undefined (idiopathic). Male infertility comprises 40% of infertility cases; in 30-45% of cases, the cause for infertility is not known, hence the term idiopathic [3, 4]. Therefore, the importance of correcting this disorder is essential for assisting couples to conceive.

Since there is no known pathology for idiopathic infertility, there is no specific treatment. Thus, management of these patients is achieved in a medical-experimental manner. In the past decades, considerable attention has been paid to the important role of stress induced by environmental factors and their effect on male reproductive capacity as a factor of infertility [5].

The first step in the treatment of idiopathic infertility in modern medicine mainly includes a variety of vitamins and antioxidants [6]. These pharmacological agents are less expensive and available to a wide range of couples. Common treatments include the administration of arginine, L-carnitine, zinc, selenium, vitamins E, C, and B12, and folic acid. These treatments have different results and are not necessarily effective in improving sperm parameters [7].

Androgens, gonadotropins and antiestrogens are also used occasionally. However, studies show that in many cases, these treatments do not lead to desired results. One study demonstrated that treatment with androgens did not result in

significant improvement in sperm parameters [8]. Clomiphene was useful in 28–10% of cases. Therefore, many infertile couples have to resort to assisted reproductive technology (ART) in the end, as these methods are currently the most successful choice [9].

Apart from the high cost of ARTs and the lack of access to advanced therapies by many couples, infertility has a significant impact on psychological and social problems. For this reason, finding effective and preferably oral agents is of great value for infertile couples, therapists and researchers.

According to WHO indices, natural semen analysis has the following conditions:

- Semen volume ≥ 1.5 ml
- Total sperm count ≥ 39 million per ejaculation
- Sperm concentration ≥ 20 million per mL
- Total movement $\geq 50\%$
- Normal sperm morphology $\geq 4\%$ [10]

In ITM, infertility has been the subject of much attention by physicians, and most books mention many medicines and foods for treating infertility of various causes. Medicinal plants are of great interest due to easier access and lesser side effects and thousands of years of scientific support. In this paper, an ITM product that is used to improve spermatogenesis parameters is introduced.

Case presentation

Patient history based on modern medicine

A 34-year-old man with a history of unexplained infertility for 2 years who was treated with antioxidants but did not achieve the desired results.

The initial spermogram revealed semen volume: 12 ml, sperm count: 4.13 million/ml, sperm motility: 40%, and normal morphology: 13%. Other tests such as prolactin, testosterone, FSH, LH, TSH, Vit D were normal. No smoking

or alcohol history, and no other complaint were reported. The patient's BMI was 27. He is a freelancer and has no contact with any particular chemicals.

Patient history based on Iranian traditional medicine

The patient had moderate abdominal obesity. He was olive-skinned with brown eyes and hair. Regarding gastrointestinal symptoms,

he complained of bloating and constipation associated with diet. There was no pain in abdominal examination. The patient had good sex, with no premature ejaculation. The hair density was moderate in the pubic area, and the semen was milky to white-colored (according to the patient).

He had a distinct history of eating, drinking and sleeping irregularly. The patient was not under severe stress and did not exercise.

Table 1. Ingredients of lobub morakab

Persian drug name	Drug name	Ratio (unit)
Pesteh	<i>Pistacia vera</i> (pistachio)	5
Nargil	<i>Cocos nucifera</i> (coconut)	5
Fandoq	<i>Corylus avellana</i> L. (hazelnut)	5
Badam	<i>Prunus dulcis</i> (almond)	10
Konjed	<i>Sesamum orientale</i> (sesame)	10
Faniz	Sugar	10
Joz-e Bawwa	<i>Myristica fragrans</i> (nutmeg)	1
Habb-or Rashad	<i>Lepidium sativum</i> (garden cress)	1
Darfelfel	<i>Piper elongatum</i> (long pepper)	1
Aspest	<i>Medicago sativa</i> L. (alfalfa)	1
Zanjabil	<i>Zingiber officinale</i> (ginger)	2
Kababeh chini	<i>Piper cubeba</i> (cubeb)	2
Kondor	<i>Boswellia carteri</i> (frankincense)	2
Bahman-e sorkh	<i>Statice limonium</i> L.	3
Bahman-e sefid	<i>Centaurea behen</i>	3
Qodouomeh	<i>Alyssum minus</i> L. (alyssum)	6
Asal	Honey	140

Table 2. Sperm analysis before and after treatment

Semen analysis	Volume	Sperm count	Sperm motility	Normal Morphology
Before treatment	12 ml	4.13 million	40%	13%
After treatment	8.5 ml	21 million	61.58%	48%

Treatment

Lifestyle modifications based on Iranian traditional medicine

Due to the irregularities in eating, drinking and sleeping habits, he was given necessary explanations and ITM recommendations for a healthier eating and sleeping.

The patient was advised to have regular sleep and follow the pattern of sleeping 10 pm to 6 am most of the time, avoiding day-time sleep, especially for long hours. He was also recommended to exercise regularly and to avoid excessive inactivity. He was discouraged from consuming yogurt, pickles, cucumber and tomato salad with his food and was recommended to chew food slowly so that he would not need to drink water with food.

Medications based on Iranian traditional medicine

After referring to the traditional medicine clinic, the patient was treated with *lobub morakab*. Since the spermatogenesis takes 3 months, treatment should continue for at least 3 months. Thus, he was advised to take the medication for 12 weeks. The patient regularly ate 5 grams of the medication in the morning and at night before bed, with warm milk. The composition of *lobub morakab* can be seen in the table 1.

Following treatment, the patient had a significant improvement in spermogram indices (Table 2), and the couple were able to conceive.

Discussion and conclusion

In ITM, adherence to the six principles of health is one of the most important pillars of treatment, with nutrition of utmost significance. According to Iranian traditional medicine, following the first stage of digestion food enters the liver, where the second digestion takes place. The blood from these two digestions is delivered to the vessels

for the third digestion, where each organ takes the nutrients it needs. Blood reaches the organs, in which the fourth stage -tissue digestion- takes place. Semen is produced at this stage of digestion from the blood, so a good digestion in all stages it is necessary for semen production [11, 12].

ITM scholars believe that in case of a decrease in semen, the amount of its comprising matter – meaning food should be increase. Thus, consuming the right types of food is the first choice in treatment. Foods that can be used as treatment in this regard, must have three properties: 1 - highly nutritious 2 - vascular bloating 3 - have a warm temperament (*Mizaj*). Indeed, the degree of hotness should be moderate. Hence, a drug with these three properties was chosen.

On the other hand, for a healthy reproductive system, the three vital organs (brain, heart, liver) should be healthy. Thus, dysfunction or weakness of the vital organs, the stomach, kidneys, or the testicles where semen production takes place, can lead to infertility [13, 14, 15].

Considering the causes of infertility in ITM, *lobub morakab* was chosen for treatment. The effectiveness of this compound on fertility has been repeatedly emphasized in ITM books. This medication enhances ejaculation and libido (especially if the disability is due to general body weakness) and tonifies the kidneys, bladder and brain and is very beneficial in sexual activity. When there is a decrease in semen, the body should be provided with appropriate food. Accordingly, foods with high nutritional value are recommended [16]. *Lobub morakab* is composed of ingredients mentioned in table 1, and should be consumed in combination with milk. Considering the high nutritional value, vascular bloating, and hot *Mizaj*, *lobub morakab* has all the characteristics of an aphrodisiac, semen-producing drug. On the other hand, the

monographs mentioned in this combination, have the property of tonifying the brain and other key organs based on the perspective of ITM. It is also a rich source of a variety of antioxidants.

In modern medicine, free oxygen radicals are recognized as an important factor in sperm dysfunction. Studies show that free radical production affects sperm quality and motility, and seminal plasma antioxidant decrease is closely linked to sperm quality. Thus, antioxidant compounds are prescribed in patients with infertility. They include some vitamins (carotenoids, vitamins C, E, B) and minerals (zinc, selenium, manganese, copper), arginine, carnitine, and Q10, and etc. That protect the body's cells against oxidation [17].

Natural sources of antioxidants:

- Arginine: is one of the amino acids that protects the body against oxidation. Food sources of arginine include almonds, pistachios, hazelnuts, walnuts, sunflower seeds, sesame seeds, coconut, etc. [18].
- Carnitine: is a group of vitamins and consists of two amino acids lysine and methionine. Studies show that it improves sperm count, concentration and morphology. Dairy and meat are good sources of carnitine [19].
- Coenzyme Q10: is a fat-soluble vitamin with antioxidant effects. Studies have demonstrated that it increases sperm motility. Coenzyme Q10 can be found in meat and nuts such as almonds, pistachios, hazelnuts [20].
- Zinc: Studies have shown that zinc deficiency affects sperm count. All kinds of meat and seafood and almonds, pistachios, hazelnuts and walnuts contain zinc [21].
- Selenium: deficiency can affect testosterone and consequently sperm production. This micronutrient has antioxidant properties and is effective on sperm motility. Meat, liver,

sunflower seeds and nuts are good sources of selenium.

- Vitamin E: has a role in sperm motility and quality as demonstrated in studies. Dietary sources of vitamin E include milk, butter, eggs, sunflower seeds, sesame seeds, almonds, hazelnuts, pistachios, cashew nuts, walnuts, and wheat germ.
- Vitamin B12: deficiency affects sperm count and motility. Meat, dairy and eggs contain vitamin B12.
- Vitamin C: deficiency can affect sperm count. Sources of vitamin C include fresh fruits and vegetables [22].

Considering the outcome of treatment in this patient, it seems that when the patient receives food that contains a variety of antioxidants (that is, when nutritional value is also considered alongside antioxidant properties), more favorable results are expected.

This patient had significant improvement in post-spermogram results that lead to fertility. In an observation made by Sohrabvand et al. on a similar combination, the improvement in spermogram indices was evident [23]. Moreover, Nejatbakhsh and colleagues examined the effect of this combination on 13 patients and obtained favorable results [24]. Despite the fact that antioxidants are not necessarily effective in improving spermograms, observations of Sohrabvand and Nejatbakhsh. It may be concluded that similar to what ITM scholars believed, the nutritional component is of importance in this regard.

It seems that the most helpful use of ITM in the infertility treatment is in idiopathic cases. This is because in modern medicine this disorder is mainly managed by recommending the use of vitamins and antioxidants, which is in fact a nutritional approach. As noted, the basic pillar of treatment of any disease (including reproductive disorders) is

nutrition. Moreover, ITM takes a temperamental-humoral approach towards treatment, and therefore the food and medications prescribed for each patient are personalized based on his temperament and dystemperament. Misdiagnosis of temperaments can lead to failure in treatment.

Based on these findings, integrating documented experiences of ITM with current treatments can help guide future research plans in this area and contribute to therapeutic advances. Considering the outcome of treatment in this patient, it seems that utilizing the rich resources of Iranian medicine along with modern technologies can lead to good results for patients, which necessitates further clinical trials.

Conflict of Interest

The authors have no conflict of interest in the publication of this article.

Contributing Authors

This article is the outcome of treatment measures by Dr. Mokaberinejad. Dr. Mahroozade and Dr. Akhtari cooperated in documenting and writing the article.

Acknowledgments

The authors of this paper appreciate the patient and his wife's cooperation in participating and completing treatment and healthcare processes.

References

- 1- Gurunath S. et al, Defining infertility: a systematic review of prevalence studies. *Human reproduction update*, 2011, 17: 575-88.
- 2- Behjati Ardekani Z, Akhondi MM, Kamali K, Fazli Khalaf Z, Eskandari S, Ghorbani B. Mental health status of patients attending avicenna infertility clinic. *J Reprod Infertil* 2010 Dec;11(4(45)):319-24

- 3- Andreas Jungwirth, Aleksander Giwercman, Herman Tournaye. *European Association of Urology Guidelines on Male Infertility: The 2012 Update*. *European Urology*, Volume 62, Issue 2, August 2012, Pages 324-332.

- 4- Tournaye HJ, Cohlen BJ. Management of male-factor infertility. *Best Pract Res Clin Obstet Gynecol*. 2012 Dec;26(6):769-75. doi: 10.1016/j.bpobgyn.2012.05.005. Epub 2012 Jun 16.

- 5- Aitken RJ, Oxidative stress, DNA damage and Y chromosome. *Reproduction* 2001; 122:497-506.

- 6- Eslamian G, Amirjannati N, Sadeghi MR, Rashidkhani S, Hooshangi A, Hekmatdoost A. The effects of combined supplementation of docosahexaenoic acid and vitamin E on fatty acid changes in sperm membrane in asthenozoospermic men. *Iran J Nutr Sci Food Technol* 2013; 8(1):33-7.

- 7- Sinclair s. male infertility: nutritional and environmental considerations. *Altern Med Rev*. 2000; 5(1):28-38.

- 8- Vandekerckhove P et al. Androgens versus placebo or no treatment for idiopathic oligo/asthenospermia, *Cochrane Database Syst Rev*. 2007 Jul 18; (4):CD000150.

- 9- Speroff L, A. Fritz M. *Clinical Gynecologic Endocrinology and Infertility*. Philadelphia: Williams and Wilkins. (2005).

- 10- World Health Organization. *WHO Laboratory Manual for the Analysis of Human Semen and Sperm Cervical Mucus Interaction*. 5th ed. Cambridge, UK: Cambridge University Press; 2010.

- 11- Jorjani SI, Zakhire K. *Qom: Rehabilitation Institute of Natural Medicine*; 2013.

- 12- Razi Z. *Alhavy Altb. Correction by Heisam Taeemi, Dar Al Ehya Al Arabi*; 2002.

- 13- M Tansaz, S Adhami, R Mokaberinejad, B Namavar Jahromi, F Atarzadeh, An overview of the causes and symptoms

of male infertility from the perspective of traditional persian medicine. The Iranian Journal of Obstetrics, Gynecology and Infertility 18 (182), 11-17

14- Ibn Sina H. Al-Qanun fi al-Tibb. Beirut, Lebanon: Dar al-kotobalelmiah; 1991.

15- Al-Razi AMZ. Resale Bahyh. Tehran: Institute of History of Medicine; 2009. (Persian).

16- Mahroozade S, Sohrabvand F, Bioos S, et al. Male infertility in Iranian traditional medicine, causes, treatment and compares it with modern medicine. Iran J Obstet Gynecol Infertil. 2016; 18:1-11.

17- El-Taieb MA, Herwig R, Nada EA, Greilberger J, Marberger M. Oxidative stress and epididymal sperm transport, motility and morphological defects. Eur J Obstet Gynecol Reprod Biol. 2009;144:199-203.

18- Shils ME, Shike M, Ross AC, Caballero B, Cousins RJ, eds. Modern Nutrition in Health and Disease. 10th ed. Philadelphia PA: Lippincott Williams & Wilkins; 2006.

19- Zhou X, Liu F, Zhai S. Effect of L-carnitine in nutrition treatment for male infertility: a systematic review. Asia Pac J Clin Nutr. 2007;16:383-389.

20- Balercia G, Mancini A, Paggi F, et al. Coenzyme Q10 and male infertility. J Endocrinol Invest. 2009;32:626-632.

21 -Schlegel P. Supplement to enhance male fertility. Biennial Rev Infertil. 2013;3-7.

22- Heydar M, Hassan S. Scientific Basis of Health and Diet Food. Tehran, Iran: Islamic Culture Publications Office; 2007.

23- Sohrabvand F, Mahroozade S, Bioos S. Improvement

in Sperm Parameters with Traditional Iranian Remedy: A Case Report. Journal of Evidence-Based Complementary & Alternative Medicine.2016.

24- Soodabeh Bioos, Esmail Nazem, Farnaz Sohrabvand, Hamid Sohanaki, Fatemeh Nejabatbakhsh. A Traditional Iranian Medicine (Majoon-e Loboob) for Idiopathic Male Infertility: A Case Series. Traditional and Integrative Medicine 2016. 1(1):47-51.

Access This Article Online	
Quick Response Code:	Website: www.ajtcam.ir
	DOI: 10.22040/ATCAM.2019.108133 

Submit your next manuscript to Asian Journal of Traditional, Complementary and Alternative Medicines and we will help you at every step:

- We accept pre-submission inquiries
- We provide round the clock customer support
- Convenient online submission
- Thorough peer review
- Inclusion in indexing services
- Maximum visibility for your research

Submit your manuscript at

WWW.AJTCAM.IR