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Dr. Kalaiselvan Ganesan

M.D. Scholar, Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Dr. Kaesitha Ragupathi

M.D. Scholar, Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Dr. Annamalai D

M.D. Scholar, Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Dr. Jebalin Josco

M.D. Scholar, Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Dr. Prabhu Narasimman

Resident Medical Officer., Lecturer Grade II, Department of Physiology, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Dr. Geethanjali Sankar

Head of Department (i/c), Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Corresponding Author:

Dr. Kalaiselvan Ganesan

M.D. Scholar, Department of Acupuncture and Energy Medicine, International Institute of Yoga and Naturopathy Medical Science, Chengalpattu, Tamil Nadu, India

Integrated approach of Yoga and Naturopathy on Varicocele: A case report

Kalaiselvan Ganesan, Kaesitha Ragupathi, Annamalai Dharuman, Jebalin Josco, Prabhu Narasimman and Geethanjali Sankar

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Abstract

Background: Varicocele is a vascular condition characterized by the dilation and tortuosity of the pampiniform plexus due to retrograde venous blood flow through the internal spermatic vein. It is a leading reversible cause of male infertility, affecting approximately 15% of the general male population, 35% of men with primary infertility, and up to 80% of those with secondary infertility. While surgical interventions such as varicocelectomy remain the conventional treatment, non-invasive approaches are gaining attention for their potential to improve testicular health and reproductive outcomes. Naturopathy and yoga, known for their ability to enhance circulation, reduce oxidative stress, and regulate hormonal balance, may serve as promising adjunct therapies in the conservative management of varicocele.

Case presentation: This case report presents a male patient diagnosed with varicocele who underwent a structured naturopathic and yogic intervention as an alternative to surgical management. The therapeutic protocol included acupuncture, hydrotherapy, specific yogic asanas targeting pelvic circulation, relaxation techniques, and lifestyle modifications. The patient was periodically assessed for symptom relief, changes in testicular venous architecture, and overall well-being.

Results: Following the intervention, the patient demonstrated significant improvements, including reduced scrotal discomfort, and improved testicular blood circulation. Symptom related to pain and scrotal heaviness were notably reduced. Doppler ultrasound findings indicated decreased venous reflux, suggesting improved vascular function.

Conclusion: This case report highlights the potential efficacy of naturopathy and yoga as non-invasive therapeutic strategies in the management of varicocele. The observed improvements suggest that these modalities may help alleviate symptoms, enhance testicular function, and improve fertility outcomes without surgical intervention. While this case provides encouraging insights, further controlled studies with larger sample sizes to validate the efficacy of naturopathic and yogic interventions in varicocele management.

Keywords: Varicocele, male infertility, naturopathy, yoga therapy, acupuncture, alternative medicine, non-surgical management, holistic health

Introduction

Varicocele is defined as the condition that is an abnormal dilation and tortuosity of the pampiniform plexus surrounding the testis due to reverse blood flow through the internal spermatic vein [1]. It affects nearly 15–20% of the general male population, with a higher prevalence among individuals with infertility - 35% in those affected by primary infertility and up to 80% in cases of secondary infertility [2]. While most men with varicocele remain asymptomatic, the primary clinical manifestations include infertility and chronic scrotal pain. The underlying causes of pain are not fully understood but may be due to increased testicular temperature, oxidative stress, hypoxia, venous pressure, hormonal imbalances, or the reflux of toxic renal and adrenal metabolites [3].

Palpation is the method used to diagnose varicocele. Additionally, ultrasound has been employed for accurate diagnosis and detection [4]. Treatment for varicocele is not always necessary unless it affects fertility or causes significant pain. In such cases, a thorough evaluation is required to rule out other causes of pain, such as infection or trauma.

Conventional treatment options range from surgical approaches such as varicocelectomy, laparoscopic surgery, embolization, and microsurgical sub-inguinal varicocele repair [5]. Alternative treatment methods like yoga and naturopathy have been associated with reproductive health, and various studies have shown that some of these practices are enjoyable and helpful. It has been demonstrated more recently that yoga benefits men's reproductive health, especially Premature Ejaculation (PE) [6]. Because of these results, the current study set out to evaluate the efficacy of certain naturopathic and yoga techniques in managing varicocele.

Case presentation

A 36-year-old man presented with Grade 4 bilateral varicocele and underwent conventional treatment at a private hospital in Hyderabad, South India. He had been experiencing left scrotal pain, a feeling of heaviness, and discomfort for the past three months. These symptoms worsened with prolonged standing and walking but were relieved to some extent when lying down. The pain was non-radiating.

He was diagnosed with Left Bundle Branch Block (LBBB) on a routine Electrocardiogram (ECG). He reported that his symptoms worsened gradually over time. There were no other significant past medical conditions. On examination, both sides had a Grade 4 varicocele, with the left side being more severely affected. so, He was prescribed the following medications by a urologist: Diosmin (450 mg) + Hesperidin (50 mg), Folic Acid (5 mg), Levo-carnitine (340 mg), Coenzyme Q10 (50 mg) + Zinc (5 mg) + Lycopene (2.5 mg) + Astaxanthin (8 mg), Clomiphene (50 mg)

The patient was under the medications regularly for three months but reported minimal improvement in his symptoms.

The patient was referred to IYNMS Hospital. He arrived with the same grievances and sought treatment using integrative and alternative methods. Before treatment, the patient had bilateral Grade 4 varicocele, as confirmed by ultrasound findings after a thorough evaluation. The patient's left testicular volume was 9.4 cc, while the right testicular volume was 12.54 cc. Additionally, the Pampiniform plexus of veins was dilated on both sides with reflux on Valsalva in a supine position, extending up to the lower pole of the testis. The maximum vein diameter at the left testicular lower pole is 5.8 mm. The patient received acupuncture, hydrotherapy, and yoga in addition to conventional medication. Following the diagnosis, the specific protocol has been formulated based on the previous research on yoga and naturopathy to significantly improve the related reproductive health.

The patient was advised to visit the hospital regularly for routine treatment and observation. The patient reported significant relief from symptoms, including reduced scrotal soreness and heaviness, after following two weeks of treatment (Table-1, 2, 3).

Follow-up

Due to the inconvenience of the patient to visit regularly to the outpatient department, a home-based protocol has been designed and instructed to follow the protocol at home and also to report through WhatsApp. By the fourth week, his condition had greatly improved, and he continued his hydrotherapy and yoga practices at home. (Table-1, 2)

Throughout treatment, the patient reported no significant adverse reactions.

Intervention

Table 1: Yogic intervention

Yoga			
S. No.	Asana	Rounds	Duration
1.	Surya namaskara	12 rounds	One hour (twice a day)
2.	Vajroli mudra	20 rounds	
3.	Moola bandha	10 rounds	
4.	Sarvangasana	Holding 5 minutes	
5.	Dynamic setubandasana	25 rounds	

Table 2: Naturopathic intervention

Hydrotherapy			
S. No.	Treatment	Duration	Frequency
1.	Gastrohepatic pack	15 minutes	Alternate days
2.	Cold pack (genital area, especially on scrotum)	10 minutes (5 times)	Daily
3.	Cold hip bath	20 minutes	Alternate days
4.	Mud pack (abdomen & eye)	20 minutes	Daily

Table 3: Description of acupuncture points

Acupuncture			
S. No.	Points	Location	Depth of needling
1.	Cv-4	On the anterior midline of the lower abdomen, 3 cun below the umbilicus.	1.5cun
2.	Cv-3	On the midline of the lower abdomen, 4 cun below the umbilicus.	1.5cun
3.	Sp-9	In the depression on the lower border of the medial condyle of the tibia.	1.5cun
4.	Sp-6	3 cun directly above the tip of the medial malleolus, on the posterior border of the tibia.	1.5cun
5.	Ki-12	4 cun below the umbilicus, 0.5 cun lateral to the anterior midline.	1 cun
6.	Ki-11	5 cun below the umbilicus, 0.5 cun lateral to the anterior median line.	1 cun
7.	Liv-10	3 cun directly below Qichong (ST30), at the root of the thigh, inferior to the pubic tubercle and on the lateral border of the adductor longus.	1 cun

Note – all these points are needled by the perpendicular method of insertion, and the duration of needling -20 minutes

Results

The results of this study show that varicocele significantly improved after a 4-week yoga and naturopathic intervention. It was determined that the patient had bilateral Grade 4 varicocele prior to treatment, with a left testicular volume of 9.4 cc and a right testicular volume of 12.54 cc. The fact that the left testicular volume increased to 12 cc after the intervention, while the right testicular volume stayed at 10 cc, indicated the probability of testicular function recovery.

The first dilatation of the left pampiniform plexus vein, which was 5.8 mm, was a significant indicator of the severity of varicocele. And then measurements showed that the right side had decreased to 3.1 mm and the left side to 3.5 mm, suggesting improved venous drainage and less congestion. The severity of the varicocele also decreased from Grade 4 to Grade 2, according to scrotal Doppler ultrasonography.

Discussion

The finding of the study through the integrated approach of yoga, acupuncture, and naturopathy has been shown to dramatically lower pampiniform plexus pressure while also drastically reducing varicocele size. These results are consistent with previous research regarding acupuncture for clinical varicocele [7]. One among the possible explanations is acupuncture trigger central effects by releasing β -endorphins and altering key hormones (like gonadotropin-releasing hormone and corticotrophin-releasing hormone) that influence reproductive functions. By modulating autonomic nervous system activity, acupuncture could improve local blood flow and reduce pain. Moreover, its influence on reproductive hormones might help restore hormonal balance [8, 9].

In varicocele, where poor blood flow and venous congestion in the scrotum affect fertility, hydrotherapy may improve circulation and reduce swelling, potentially enhancing testicular function and sperm quality [9]. Cold applications to the genital area, cold hip baths, and Gastrohepatic packs likely played a role in the patient's recovery by promoting vasoconstriction and improving venous return [10]. Research also suggests hydrotherapy can help reduce inflammation and improve vascular health, particularly in venous congestion conditions [11].

Yoga is traditionally linked to improved reproductive health [6], especially in postures like Sarvangasana, Vajroli Mudra, and Moola Bandha. These techniques may help regulate intra-abdominal pressure, enhance blood circulation in the pelvic region, and reduce oxidative stress, a known factor in varicocele progression [9, 10, 12].

The patient's significant symptom relief and improved condition over four weeks suggest that a holistic and integrative approach may offer an effective alternative to conventional treatments, especially in cases where surgery is not the preferred option. Further research with a larger sample size and longer follow-up is recommended to validate these findings and optimize treatment protocols.

Conclusion

These findings indicate that combining naturopathy and yoga with conventional treatments can improve blood circulation, enhance testicular health, and promote varicocele regression. Increase in testicular volume and reduction in vein width positively influence reproductive health. To substantiate these findings and optimize treatment protocols, further research with larger sample sizes and extended follow-up periods is recommended.

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