

# The Journal of Phytopharmacology

(Pharmacognosy and phytomedicine Research)

## Case Report

ISSN 2320-480X

JPHYTO 2022; 11(4): 268-271

July- August

Received: 26-05-2022

Accepted: 25-06-2022

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doi: 10.31254/phyto.2022.11407

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## Uni5 Approach to Treat PCOS associated with Non-alcoholic Fatty Liver Disease: A Case Report

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### ABSTRACT

In this current case report, A 54-year-old non-alcoholic, married woman presented with chief complaints of abdominal pain and unbearable pain while passing urine, CT scan revealed an enlarged liver (16.2 cm in size) and a thick-walled cystic lesion measuring (4.3\*4.1\*6.0 in the right ovary adnexa) on 17th October 2020. The patient started following Uni5 treatment in November 2020 and continued the treatment until she was cured completely. Based on the five elements principle, she was treated for four months with Uni5 cleansing treatment, hot oil fomentation, liver tonic-rich herbs, and probiotics-rich food. Her condition was monitored through a CT scan, and after two months she was relieved from uterine fibroid and liver enlargement. This indicates that there is an association between Gut microbiomes, fatty liver, and polycystic ovarian syndrome. Therefore, a uterine fibroid can be entirely cured through Uni5 treatment.

**Keywords:** Polycystic Ovarian Syndrome, Uterine Fibroids, Non-Alcoholic Fatty Liver Disease, Gut Microbiome, Uni5.

### INTRODUCTION

Polycystic ovary syndrome (PCOS) or Stein-Leventhal syndrome – A syndrome characterized by anovulation, oligomenorrhoea, hirsutism, infertility, and obesity in young women having bilaterally enlarged and cystic ovaries. This is also one of the most common non-neoplastic cysts of the ovary. Currently, the unbalanced release of follicle-stimulating hormone (FSH) and luteinizing hormone (LH) by the pituitary along with Insulin resistance and inflammation are considered the general pathogenesis of PCOS<sup>[1]</sup>.

The ovaries are copious with insulin receptors and dysregulation of insulin signalling may augment the production of androgens in theca cells, which is the primary source of excessive androgen biosynthesis in women with PCOS. Insulin resistance leads to compensatory hyperinsulinemia – which stimulates theca cells in Luteinizing hormone sensitized ovaries to secrete testosterone and androstenedione<sup>[2]</sup>.

This interlink between Insulin resistance and hyperandrogenism, may be contributing to the Progress of non-alcoholic fatty liver disease (NAFLD) in PCOS patients. Non-alcoholic fatty liver disease (NAFLD) is a condition where there is an excess accumulation of triglycerides in the liver in the absence of excessive alcohol consumption, Hence NAFLD has a strong association with obesity, dyslipidaemia, and Type 2 diabetes mellitus. In brief, NAFLD occurs because of abnormal lipid handling by the liver, which sensitizes the liver to injury and inflammation and can progress to cirrhosis<sup>[1]</sup>.

The incidence of NAFLD in postmenopausal women has increased significantly which might be caused by oestrogen deficiency. Gut microbiota and its metabolites short-chain fatty acids (SCFA) have been shown to play important roles in the development of NAFLD<sup>[12]</sup>. The gut microbiota has been shown to affect lipid metabolism and lipid levels in blood and tissues with its link with the liver<sup>[4]</sup>. Recent studies in humans and rodents established a relationship between the gut microbiome and PCOS. It states that the dysbiosis of microbiota, (that is reduction in the diversity of microbes in combination with a loss of beneficial bacteria) - may be the potential pathogenetic factor in the development of PCOS and decrease infertility. The above study supports the hypothesis that microbiota dysbiosis may be a potential pathogenetic factor for the development of polycystic ovarian syndrome<sup>[3]</sup>.

Dysbiosis of microbiota can develop hyperandrogenism and hyperinsulinemia, which is also presented in PCOS women, which proves that PCOS and gut microbiota are connected pathologically (Fig.1).

Anatomically also physiologically, the liver, and gastrointestinal tract are connected. Through this connection, any changes in the intestine can easily affect the function of the liver since all absorbed

nutrients enter the liver through the portal vein. The intestine's microbial components and its metabolites can affect the intestine and other organs that are connected systematically [4]. This gut liver axis focuses mainly on how the microbial components and their metabolites in the intestine lead to liver abnormalities such as fibrosis and hepatomegaly, fatty liver by affecting hepatocytes including stromal cells (hepatic stellate cells (HSCs)) and Kupffer cells. This is a piece of strong evidence that by regulating the gut microbiome, it is possible that we can reverse any injury to the liver.

The case reported here focuses on the reversion of fatty liver through the regulation of the gut microbiome and affecting ovarian cysts. A case history is presented here with liver enlargement and cystic lesion in the uterus was treated and cured with the Uni5 approach, which is elaborated below:

A non-alcoholic, 54-year-old, married woman presented with complaints of severe abdominal pain, and gastritis. she also had unbearable pain while passing urine. Other complaints are loss of appetite and mild fatigue. Family history of neither uterine fibroids nor liver enlargement. She was reported menopause at the age of 48. Regarding her chief complaints, she underwent a CT scan which revealed an enlarged liver (16.2 cm in size) and a thick-walled cystic lesion measuring (4.3\*4.1\*6.0 in the right ovary adnexa), a small hiatus hernia in the stomach, multiple small simple bilateral renal cortex cysts. Serial helical sections of the abdomen were studied without administration of oral and IV contrast. Her physician suggested undergoing myomectomy (surgical removal of uterine fibroid) and prescribed pain-relieving medication to manage the abdominal pain. The pain was not relieved even after the medications and so the patient approached for Uni5 treatment in November 2020.

She underwent Uni5 treatment which was based on the five elements principle. Many ancient medicinal systems like Siddha and Ayurveda are based on the five elements theory of Pancha Bhutas [13]. According to this concept, the life force expresses different functionalities to maintain the human body in a healthy state. Nourishing, cleansing, metabolising, coordination, and rejuvenation are the five actions in the energising process. These five aspects are also manifested as one's being i.e., Body, Mind, Intelligence, Self-Awareness, and Unity-Consciousness based on the same five elements principle, the Panchal Bhutan. All these five functionalities work in a balanced manner and maintain a healthy body and mind that elevate the Self-awareness of an individual [15].

Therapeutic focus and assessment: The patient started following Uni5 treatment in November 2020 and continued the Uni5 treatment until she was cured completely.

## MATERIALS AND METHODS (TREATMENT)

Five elements – The treatment was based on the five elements principle, the Pancha Bhutas. Uni5 is an actual form of alternative medicine which is developed based on the five principal elements guiding the Ayurveda and Siddha. Energy has five qualities, in accordance with the ancient Indian medical literature, and based on unique qualities energy is classified into different elements such as

1. Space element – has the quality of transcending
2. Air element – has the quality of localizing
3. Fire element – has the quality to interact with other elements
4. Water element – has the quality of transforming one form into another
5. Earth element – has the quality of being stable

In simple terms, the Uni5 approach for treatments is designed to bring unity of body and spirit. The UNI5 system entrusts to retrieving lost

traditional practices in which, the method of treatment is designed with a holistic approach that targets both the physical and also emotional state of an individual person to reinforce healthy qualities for their well-being [13,15].

- Earth element – Diet
- Water – cleansing
- Fire – exercise
- Air-breathing
- Space - charity

Diet and Lifestyle changes: A whole organic diet practice was followed including heirloom red/black rice, different millets, and fibre-rich native vegetables. Wooden-Cold-pressed coconut and sesame oil was mostly used for cooking. Steamed banana flower, banana stem, and raw banana – were included frequently in the diet. Cooking was done mostly in the mud pot. Probiotics like fermented rice and A2 cow's buttermilk were also recommended. Probiotics played a vital role in resetting her gut health. Antioxidant-rich native black and red rice varieties were fermented. Vegetable therapy A juice was made with a mix of 5 cluster beans, one small tomato, one small lemon with peel and seeds removed, 2 black peppers, turmeric in one small teaspoon, and a bit of salt. she had this juice for 21 consecutive days and after a two-month gap, she continued to take this for another 21 consecutive days. The patient was suggested to have seven liver tonic herbs each per day and then to repeat the same for a few months. A handful of each herb along with a few black peppers was finely stone-ground to a thick paste that can be shaped to a small gooseberry size. Before lunch, this was put in the mouth or swallowed along with a glass of A2 cow's buttermilk. The seven liver tonic herbs are Ecliptic Alba, Phyllanthus Naturi, Curry leaves, Coriander leaves, Mint leaves, Orange/Lemon leaves, and Moringa leaves.

In this study, probiotics are used for the regulation of gut microbiomes, such as fermented rice water more importantly antioxidants packed rice varieties are used – that are native black rice and red rice, and cow's buttermilk are also used.

Hepatoprotections – liver tonic herbs are used as a preventive strategy for the protection of the liver and polyphenol-rich vegetable treatment to prevent liver injury.

### Liver tonic herbs

Seven liver tonic herbs are used in this study for the treatment of fatty liver they are:

Ecliptic alba also known as false daily – pharmacopoeia of Indian Ayurveda supports the statement that Ecliptic alba herbs act as a hepatoprotection. This plant is also considered to be helpful with diabetes and loaded with antioxidants [5].

Phyllanthus nature – In traditional medicine, Phyllanthus nature has been widely used to treat liver diseases [6].

Curry leaves consist of carbazole alkaloids and tannins which are considered a good hepatoprotection and it also has a high anti-oxidative property.

Coriander leaves possess hepatoprotective traits and are used to cure various liver ailments. It also enhances the function of the liver and ensures good elimination of toxins by the liver.

Mint leaves are known to boost liver function including its digestive and detoxification functions.

In general lemon leaves are packed with vitamin c and has antioxidant property, lemon leaves are known to have various pharmaceutical actions including hepatoprotection and antioxidant [7].

Biochemical and histological results of a study showed that moringa decreased liver damage also the symptoms of liver fibrosis [8].

Polyphenols – prevent injury to hepatocytes that are associated with Non-alcoholic fatty liver disease through several signalling pathways, that are:

A) suppressing activation of NF-κB pathway to inhibit inflammation.

B) increasing β-fatty acid oxidation by upregulating PPARα.

C) inhibiting lipogenesis via downregulation of SREBP-1c by activating AMPK.

D) Enhancing antioxidant defence through the Nrf2 pathway [9].

Cleansing: The patient underwent cleansing therapy, which is Uni5 water therapy, which includes intake of 1.5 litres of mild ginger-boiled warm water continuously in empty stomach. The Uni5 water therapy improved her bowel movement.

Ginger water treatment, as this is a well-known fact that ginger water is loaded with antioxidants and improves bowel movement, which is the main aim of the cleansing treatment, thus this treatment is provided. Also, a study suggests that ginger supplements in NAFLD patients will increase the body's antioxidant content and decrease inflammation [10].

Oxidative stress is a pathological mechanism that initiates and develops liver damage. Several studies claim that antioxidants are very helpful in the maintenance of oxidative- anti-oxidative in the liver [11], thereby reducing oxidative stress – Antioxidant plays a crucial role in protecting liver health.

The patient did physical activities such as walking and some simple exercises.

Castor oil hot fomentation - For abdominal pain, castor oil herbal mix was done by boiling organic Aloe vera, garlic, and turmeric in castor oil and massaging this castor oil herbal mix on the abdomen area followed by hot fomentation. The same procedure was done until the pain subsided which was approximately 10 days.

A traditional practice of vowing to do charity equivalent to the medical cost after the cure is also an important part of the treatment.

Follow up - Follow up and outcomes Follow-up was done regularly.

## RESULTS AND DISCUSSION

The common pathophysiology of PCOS and NAFLD may be the

**Table 1:** PCOS and Liver enlargement clinical signs and associated symptoms before and after Uni5 treatment.

Clinical symptoms observed	Before starting Uni5 treatment	After 45 days of Uni5 treatment	After 67 days of Uni5 treatment
Fatigue	Present	Absent	Absent
Abdominal pain	Present	Absent	Absent
Liver enlargement	16.2cm in size	Normal in size	Remained normal in size
Uterine fibroid (in the right ovary adnexa)	Cyst size appears to be 4.3*4.1*6.0 cm	Cyst size reduced to 3.6*3.0 cm	No cyst was observed
Atrophic ovary	Not observed	Atrophic right ovary	Not observed

reason for the development of liver disease in women with PCOS. This statement stands for itself that women with PCOS are more likely to develop NAFLD [2].

On the other hand, it is a well-known fact that sex hormone levels are affected by the dysfunction of the liver [14]. Therefore, we hypothesize that PCOS can develop due to liver dysfunction and so treatment oriented to liver functionality might be effective. We report a case report in which lifestyle changes including foods that helped liver functionality showed positive outcomes for this patient. Routine lab test results were done periodically to diagnose and assess the outcome of the treatment (Table 4).

After following Uni5 treatment for 15 days, the patient reported symptoms like fatigue got improved and her abdominal pain subsided approximately within 10 days (Table 1.)

Castor oil hot fomentation played a major role in resolving the abdominal pain [18]. Whereas diet and lifestyle changes improved her liver functionality. The probiotics including fermented rice, A2 cow's buttermilk along with Uni5 Cleansing therapy improved her bowel movements and helped in flushing out the toxins and improved her gut microbiome. This helped symptoms like fatigue, abdominal pain, and gastritis to be fully resolved.

An ultrasound scan after 45 days of treatment showed that the liver becomes normal in size and the right ovarian cyst size was reduced to 3.6\*3.0 cm. In addition, the small hiatus hernia in the stomach was resolved, but mild Hydroureteronephrosis was observed. Recent studies show that the prevalence of umbilical hernia is high in patients with liver ailments [16]. (Table 1).

Furthermore, the cyst in the ovary was also seen to be reduced in size. However, she had mild Hydroureteronephrosis which may be developed due to the underlying fibroid and atrophic condition of the uterus and right ovary was observed. The incidence of uterine fibroids in women with PCOS was 65% higher than in those without PCOS [16].

The treatment was continued, and an ultrasound scan is done after 67 days revealing there was no cyst in the right ovary and the liver remained in normal size, while hydroureteronephrosis was not observed. The atrophic uterus remained the same due to menopause. (Table 1). All these observations show a firm association between these two conditions and suggest rethinking the existing theory of PCOS leading to NAFLD [2].

Giving emphasis on liver health in Uni5 treatment, the liver enlargement was resolved, and subsequently, uterine fibroids and ovarian cysts got cured. Uni5 system not only resolves the clinical symptoms, but it aims to treat the root cause of the symptoms and other associated clinical issues are also cured [19,20].

Currently, there are no new complaints, and she is not on any medication.

Small hiatus hernia (In stomach)	Present	Absent	Absent
Gastritis	Present	Absent	Absent
Renal cortical cyst (Multiple small simple cysts)	Present in both kidneys	Absent	A right renal cyst of size 18*14mm is noted in upper pole
Hydroureteronephrosis	Not observed	Mild Hydroureteronephrosis	Not observed

## CONCLUSION

From this case scenario, it can be concluded that by treating liver ailment - PCOS can be cured thus, proving that liver dysfunction is the major cause for the development of PCOS in the first place. This case is evidence for the hypothesis of this study to be true which is "Improving liver function through liver tonic rich herbs, polyphenols rich vegetables, antioxidants, for modulating the metabolism of hormones accompanied with regulations of gut microbiome through probiotics and cleansing treatment". Therefore, Uni5 treatment can be used clinically for a better therapeutic outcome within a few months and to give hope to both older and young infertile women who all suffer from PCOS by increasing their overall health which will lead to a possibility of a healthy pregnancy and to have a healthy baby.

## Acknowledgement

The authors like to thank Mr. Arvind Prabhu, Dr. Jaya Mahalakshmi, and Dr. Ajay Sundar V for helping with the editing of this script and figures.

## Conflict of Interest

None declared.

## Financial Support

None declared.

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## HOW TO CITE THIS ARTICLE

Chhalliyil P, Nandini U, Thota N. Uni5 Approach to Treat PCOS associated with Non-alcoholic Fatty Liver Disease: A Case Report. *J Phytopharmacol* 2022; 11(4):268-271. doi: 10.31254/phyto.2022.11407

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