



Effect of Traditional Acupuncture in an Infertility Patient with Low Anti-Mullerian Hormone

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Abstract:

Infertility is the major health concern in the present world which is said to be a disability by WHO. In spite of various therapeutic interventions it imparts considerable disturbance to the psychological health of the female. This case is unique of its kind where the subject was able to deliver a healthy child with only traditional acupuncture as the intervention.

A 40-year-old female patient who had infertility came to our clinic in 2018. She had irregular menstrual cycles for two years and had no pain during menstruation. She had taken conventional treatment for two years and was suggested for IVF (In Vitro Fertilization) as her AMH (Anti-Mullerian Hormone) levels were low, which she was not interested to opt for. She had taken acupuncture treatments for six days. Existing studies suggest positive effects of acupuncture on infertility. This study was based on the Traditional Chinese Medicine (TCM) approach and the results were obtained in a month.

It can be found that in spite of the low AMH levels which is considered to be an important marker for infertility, the patient was able to conceive and deliver a healthy child only with acupuncture treatment. Therefore, acupuncture treatment should be considered as an integrative method for infertility management.

Keywords:

acupuncture, infertility, Anti-Mullerian Hormone, Traditional Chinese Medicine, In Vitro Fertilization



Background:

Acupuncture is a system of medicine which involves needling on specific areas of the body which is connected by energy pathways, called as meridians. Studies have suggested acupuncture as a better treatment option for both men and women infertility, by improving the sperm quality and ovaries function.^{1,2} A systematic review summarized the evidence of RCTs (Randomized Controlled Trials) using acupuncture to improve endometrial receptivity found that outcomes in women with low endometrial receptivity is statistically significant.³ Comparative study was conducted to find the combined effect of clomiphene and electro acupuncture and the medication clomiphene alone. In this study it was found that the combined intervention provided the definite effect of ovulation and pregnancy promotion in PCOS (Poly Cystic Ovarian Syndrome), where a remarkable improvement in the levels of Estradiol and Progesterone in the serum and endometrial thickness.⁴ Acupuncture with cupping have also been proven effective in the treatment of infertility.⁵ Here a case of an elderly women with infertility treated with the acupuncture is reported.

Case report:

The case is 40 years old female patient, house wife, came with the complaints of irregular menstrual cycle and unable to get pregnant for 2 years. She had taken treatments for infertility. Her AMH (Anti-Mullerian Hormone) levels were too low for her age and so IVF (In Vitro Fertilization) was recommended. The patient came to National Institute of Naturopathy, Pune on July 2018, for the same complaints and wanted to take treatment for the same. She was not taking any medicine for her problems since last 12 months. On physical examination, abdominal tightness was observed. Her extremities were cold as compared to the face and head. Considering her emotional level, the patient was anxious about her chance of getting pregnant. Although the patient was convinced that due to the age factor, it may be very difficult for her to get pregnant, took treatment with positive hopes.

At the clinic, she was given acupuncture. A TCM (Traditional Chinese Medicine) style of acupuncture was used with this patient. She was informed about the needling procedures and the needling sensations. The symptoms and the condition of the patient depicts the Chong Mai disharmony. Chong Mai is one of the eight extra meridians in our body whose main function is to regulate the reproductive system. It is said to transform the kidney essence and helps to treat hormonal pathologies. So, acupuncture points selected were SP 4, P6, LI4, LIV 3, K 14 and Ren 4. The points were needled for 30 minutes each day for six continuous days. On the sixth day, Ren meridian massage was given on the abdominal area for 5 minutes after which the needling was done. No electrical stimulation was used in the entire procedure. The patient was already on a healthy diet regime and lifestyle for two years, so no additional diet or lifestyle regime was advised. 1cun locally manufactured



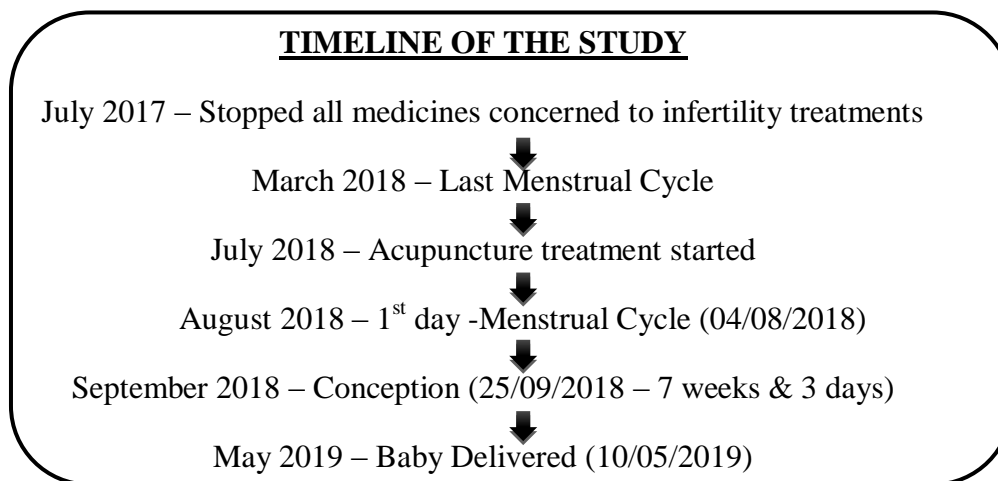
filiform needles with 0.38 mm diameter and 2.5mm length was used for the treatment. The patient had no discomfort in taking acupuncture which was observed and also understood by her regularity.

Table 1.Description of acupuncture points selected

S.No	Acupuncture Points	Location	Depth of insertion & method.
1	Sp 4 (<i>Gongsun</i>)	On the medial side of the foot, in the depression distal and inferior to the base of the first metatarsal bone	1cun, perpendicular insertion
2	P 6 (<i>Neiguan</i>)	On the flexor aspect of the forearm, 2 cun proximal to Daling P-7, on the line connecting Daling P-7 with Quze P-3, between the tendons of palmaris longus and flexor carpii radialis.	1cun, perpendicular insertion
3	LI 4 (<i>Hegu</i>)	On dorsum of the hand, between first and second metacarpal bones, at the midpoint of the second metacarpal bone and close to its radial border	1cun, perpendicular insertion
4	Liv 3 (<i>Taichong</i>)	On dorsum of the foot, in the hollow distal to the junction of the first and second metatarsal bones.	1 cun, Oblique insertion
5	K 14 (<i>Siman</i>)	On the lower abdomen, 2 cun below the umbilicus, 3 cun superior to the superior border of the symphysis pubis, 0.5 cun lateral to the midline (Shimen Ren-5). Note: The Great Compendium of Acupuncture and Moxibustion locates this 1 cun from the midline.	1cun, Perpendicular insertion
6	Ren 4 (<i>Guanyuan</i>)	On the midline of the lower abdomen, 3 cun inferior to the umbilicus and 2 cun superior to the pubic symphysis.	1cun, Perpendicular insertion

A detailed case history was taken on her first visit to the clinic. Informed consent was obtained from the patient to record her case. There were no diagnostic challenges in this case. AMH, a peptide growth factor of the transforming growth factor- β family, is considered to be a reliable marker to predict the ovarian response to stimulation. This level can be used as a marker for fertility test to find the probability of conception.^{6,7} Ultrasonography is one of the best-known diagnostic method to assess and evaluate the pelvic anatomy and ovarian reserve.^{8,9} Her AMH levels were assessed before the start of the session and also an ultrasonography of the abdomen and pelvis. Her AMH level was too low which was 0.15 ng/mL and she had complex adnexal cystic lesion and small left follicular cyst with homogenous internal echoes, likely hemorrhagic or endometriotic cyst. Her vitals were checked which was normal. Based on her BMI (Body Mass Index) of 27.2 she was categorized as overweight. There were no adverse and unanticipated events after or during the treatment. The reports were also taken after the sessions, which had minimal changes in it. But the patient got her menstrual cycle without any medicines on 4th August 2018, and again after 7 weeks of amenorrhea, she got positive results in pregnancy test. With no complications the patient had delivered the baby.

Fig. 1. Timeline of the study



Discussion:

A Traditional approach of acupuncture for a very short-term period of 6 days have served better outcome in the patient. The patient was feeling good after the acupuncture sessions and her anxiety levels were much reduced as she reported. In spite of low AMH levels the patient was able to get pregnant and delivered the baby. One study has also found that AMH levels cannot predict the probability of pregnancy in elderly women with



unexplained infertility with other hormonal therapies.¹⁰The patient expressed her happiness when she had positive result in her pregnancy test. There were no complications throughout her pregnancy and the patient did not take any hormonal medications during her pregnancy period. She has delivered a healthy baby after full term.

This is the first paper to show the effectiveness of the traditional approach of acupuncture in infertility with a short duration of treatment. The patient also felt relaxed after the sessions. Acupuncture have become a common treatment option for the infertility in both males and females.

Conclusion:

From this study we can understand the effectiveness of traditional acupuncture. Even though the results are promising, further studies with larger sample size is needed to prove the effectiveness in a larger population. Acupuncture being a simple cost-effective treatment method should be considered as an integrated approach for the infertility management.

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