

CHINESE HERBS AND FERTILITY

by Subhuti Dharmananda, Ph.D., Director, Institute for Traditional Medicine, Portland, Oregon

Chinese herbs have a long history of use in aiding fertility. Records indicating herbal treatment of infertility and miscarriage date back to 200 A.D., including mention of formulas that are still used for those purposes today, in the famous medical text *Shang Han Lun*. The first book devoted solely to gynecology and obstetrics, **The Complete Book of Effective Prescriptions for Diseases of Women**, was published in 1237 A.D. In modern China, herbs are used to treat infertility in both men and women and the results of large scale clinical trials are reported in Chinese medical journals; these results have been abstracted in English by a research group in Hong Kong since 1986, and translations of whole articles are obtained, by request, from several translators. The Institute for Traditional Medicine has acquired dozens of these reports and has analyzed the information to aid practitioners in selecting the appropriate herbs for different infertility cases and to explain the dosage, duration of treatment, and prognosis.

THE HERBS USED TO AID FERTILITY

No individual herb is considered especially useful for promoting fertility. Rather, more than 150 different herbs, usually given in complex formulas comprised of 15 or more ingredients, are used in the treatment of infertility with the purpose of correcting a functional or organic problem that caused infertility. The design of the formulas has varied somewhat over the centuries, based on prevailing theories and available resources, and individual practitioners have a preference for particular herbs, thus accounting for some of the variations among formulas that are recommended. However, differences among individuals being treated accounts for the greatest variation in the selection of herbs and formulas to be used. There are some "exotic" materials that are frequently found in fertility formulas, such as deer antler and sea horse, but the prominent materials are derived from roots, barks, leaves, flowers, and fruits. Formulas for men and for women tend to be different, but there is considerable overlap in the ingredients used.

HOW THE HERBS ARE ACQUIRED AND CONSUMED

In China, a number of fertility formulas can be purchased off the shelf in public pharmacies, and for uncomplicated cases, this is often adequate. However most men and women in the Orient are treated for persistent infertility by obtaining prescriptions from a doctor who is expert in Chinese herbs. In the U.S., it is uncommon to find fertility-promoting formulas in stores or other outlets; rather, they are prescribed by acupuncturists, naturopaths, or medical doctors who are familiar with Chinese herbs. The Institute for Traditional Medicine maintains a listing of such practitioners, to aid individuals anywhere in the U.S. to find a local expert in this field. Depending on the circumstances, one may be asked to ingest herbs in the form of pills, tablets, granules, or decoctions (teas). Some of the treatment plans involve using a single herb combination regularly, while others suggest using two, or even three, different formulas at different times of the menstrual cycle. All of these means can be effective, so long as the correct formula and correct dosage are used for an adequate period of time.

THE SUCCESS RATE FOR CHINESE HERB TREATMENTS

Although the outcome for any given individual cannot be predicted, the clinical studies conducted in China indicate that about 70% of all cases of infertility (male and female) treated by Chinese herbs resulted in pregnancy or restored fertility. Depending on the particular study and the types of infertility treated, success rates ranged from about 50% up to more than 90%. Included in these statistics are cases of infertility involving obstruction of the fallopian tubes, amenorrhea, absent ovulation, endometriosis, uterine fibroids, low sperm count, nonliquification of semen, and other causes. In China, due to the greater experience with using herbs, the ability to directly integrate traditional and modern methods of therapy, and the willingness of individuals to consume relatively large doses of herbs, the success rates are probably somewhat higher than can be achieved in the U.S. at the present time. Nonetheless, U.S. practitioners have had many experiences of success in treating infertility.

DURATION OF TREATMENT TO ATTAIN FERTILITY

In the Chinese clinical studies, daily or periodic use of herbs usually resulted in restored fertility within three to six months. Many Chinese doctors feel that if pregnancy is not achieved within about eight to nine months, then it is unlikely that the treatment will be successful with continued attempts. In Japan, where doctors give lower dosages of herbs and are restricted to using a smaller range of herbs, treatment time is usually longer: from six to fifteen months. In the U.S., nearly the full range of Chinese herb materials are accessible, but the dosage to be used is usually lower than in China; as a result, it is estimated that pregnancy can be achieved within six to twelve months. It must be remembered, however, that approximately one-third of infertility cases may fail to respond to all reasonable attempts. One advantage of the Chinese herbal approach is that even if pregnancy does not occur, benefits to health can be attained because the herbs address imbalances that affect other aspects of health besides infertility.

SAFETY OF THE HERBS

Chinese herbs are used in the U.S. as traditional foods and not as drugs. As such, there has been no formal testing of either the safety or efficacy of any of the individual herbs or formulas. The Chinese have had long experience using these herbs; from all informal reports and clinical studies, the Chinese claim that the herbs are not only safe to use, but that healthy children are usually born without any problems during delivery. However, it is important to recognize that the use of Chinese herbs is relatively new in the U.S. and that Americans today may have more stringent safety standards than the Chinese have had in the past. Therefore, one should pay attention to perceived adverse responses to the herbs. The Chinese herbs that are used in the U.S. are not overtly toxic, but there are a few possible adverse reactions which are rare and can usually be avoided by slight adjustment in formulation or method of administration. These reactions may include dizziness or headache, dry mouth, nausea, flatulence, or change in bowel conditions. If such reactions are not resolved naturally within about three days or if they are severe, the prescribing physician can make an appropriate adjustment. In any case, by discontinuing use of the herbs, any of these reactions will disappear promptly. Allergic reactions to herbs are rare, but if a person suffers from "environmental allergy syndrome," then the herbs can also cause the same reactions as other materials encountered in the normal environment.

MECHANISM OF ACTION

The mechanism of action of the herbs is not known precisely, and undoubtedly varies according to the type of infertility problem being treated and the herb formula that is used. The traditional Chinese views are that infertility tends to arise from one or more of three prominent causes:

1. A "deficiency" syndrome prevents the hormonal system from properly influencing the sexual and reproductive functions. This is said to be a weakness of the "kidney and liver" which may influence various body functions producing symptoms such as frequent urination, weakness and aching of the back and legs, impotence, irregular menstruation, and difficulties with regulation of body temperature. Deficiency syndromes are treated with tonic herbs that are said to nourish qi (e.g., ginseng, codonopsis, atractylodes, astragalus), blood (e.g., tang-kuei, peony, ho-shou-wu, gelatin), yin (e.g., lycium fruit, ligustrum, eclipta, ophiopogon), or yang (e.g., epimedium, cistanche, cuscuta, eucommia), and are selected according to the overall evaluation of symptoms.
2. A "stagnancy" syndrome prevents the sexual and reproductive organs from functioning despite normal hormone levels and normal ability to respond to hormones. This is said to involve a stagnancy of "qi and blood," which has the impact of restricting circulation to the tissues involved. Qi stagnation is often noted by tense muscles, restrained anger, and digestive disorders; herbs for resolving the stagnancy include bupleurum, cyperus, lindera, and various citrus products. Other symptoms that might arise include abdominal pain or bloating, chronic inflammation, and formation of lumps (including cysts and tumors). Blood stagnation often occurs following childbirth, surgery, injury, or severe infection and is typically noted when there is severe pain (such as dysmenorrhea), or hard swellings and obstructions; abnormal cell growth, including dysplasia and cancer, are thought to involve blood stagnation. Herbs such as salvia, red peony, persica, and carthamus may be used.
3. A "heat" syndrome, which causes the affected organs to function abnormally. Heat syndromes may be associated with an infection or inflammatory process. This type of syndrome can produce abnormal semen quality leading to male infertility, while gynecologic infections can maintain female infertility by blocking the passages, altering the mucous membrane conditions, or influencing the local temperature. Herbs that inhibit infections and reduce inflammation are used, including gardenia, phellodendron, patrinia, and lonicera.

In each case, the purpose of the Chinese herbs is to rectify the underlying imbalance to restore normal functions. Western medicine can diagnose tubal blockage (which usually corresponds to blood stagnancy in Chinese medicine) and infection (which corresponds to heat syndromes of Chinese medicine) and in many cases can successfully treat these causes of infertility. However, Western medicine often fails to diagnose deficiency syndromes and most of the stagnancy syndromes. Therefore, the majority of Chinese herb formulas to be applied in the U.S. are those that counteract the deficiency (called tonics) and those that resolve the stagnancy (called regulators). A description of Chinese herb formulas used for infertility is presented in the appendix to **Chinese Herbology**, a training manual produced by the Institute for Traditional Medicine.

The hormonal effects of Chinese herbs used to treat impotence and infertility and to prevent miscarriage have been demonstrated in laboratory experiments. For example, the laboratory evaluation of Huanjing Decoction (composed of rehmannia, ho-shou-wu, ligustrum, morus fruit, achyranthes, dipsacus, cynomorium, astragalus seed, and cuscuta) was administered to senile mice for four months, two weeks treatment, one week break. Estradiol and dihydrotestosterone receptors in the nucleus of thymic cells were decreased to levels found in young mice; cytosol estradiol receptors increased. Also,

the formula influenced the immune system: it increased thymus weight, thymic index, and prevented atrophic changes in the ultrastructures of thymic lymphocytes and epithelial reticular cells.

COMBINING CHINESE HERBS AND WESTERN THERAPIES

In China, the combined use of modern drugs or other Western medical techniques along with Chinese herbs is not uncommon; some doctors are trained in both methods, and Western and traditional doctors often work together in Chinese clinics and hospitals. When the modern methods are applied, the herb therapies do not usually need to be altered compared to cases where the herbs are used alone. Most of the cases of infertility successfully treated in China do not rely on techniques such as in vitro fertilization, which are quite expensive and have only a modest rate of success in the U.S. where the modern fertilization methods are most highly developed.

INFERTILITY PROBLEMS NOT OVERCOME BY USING CHINESE HERBS

It is not advisable to suggest that something simply cannot be accomplished in the field of health care (because there are almost always exceptions), but there are some areas where chances of success are considered quite low. Some women suffer from amenorrhea that is associated with a very low body fat content. This is apparently exacerbated by strenuous exercise (e.g., distance running). Changes in diet and exercise may be necessary before Chinese herbs or other therapeutic methods can be effective. In a few cases, a woman's immune system will attack her husband's sperm and thus make fertilization virtually impossible; this can not be overcome with Chinese herbs. People who are under very high levels of stress or who have multiple health problems may need to have these things addressed-partly with use of Chinese herbs-before a reasonably high chance of success can be expected in the specific treatment of infertility.

USE OF HERBS WHEN PREGNANCY OCCURS

The herbs for inducing fertility are usually discontinued once pregnancy is suspected or confirmed. In most cases, it is not necessary to use herbs during pregnancy. Women with a history of miscarriage or who are deemed at high risk for miscarriage (somewhat more common among women who have experienced prolonged infertility) may wish to take herbs that are traditionally used in such cases by Chinese women. Certain herbs can be used during pregnancy to enhance the health of the mother and to counteract symptoms of morning sickness. In addition, it is reported that labor can be made easier by proper application of herbs and acupuncture. Books on the subject of herbal health care for pregnancy and nursing can be traced back to such important works as **A Precious Medical Book on Obstetrics for Home Use**, published in 1184 A.D.

THREATENED MISCARRIAGE

Threatened miscarriage, if due to an imbalance in the mother's system (but not if due to genetic problems with the fetus), can often be overcome with application of herbs and possible adjunct therapy with moxa or acupuncture. The method to be used and the procedures to follow should be discussed early in the pregnancy so that appropriate steps can be taken should bleeding, fetal agitation, or early contractions occur. It is important to note that most cases of early miscarriage (sometimes called spontaneous abortion) are not related to an imbalance in the mother's system but are rather a natural

and fairly common event, possibly due to a development problem of the embryo. Later in the pregnancy, weaknesses in the mother's system or excessive fetal movement, become a more prominent factor. There is a particular herb formula, called Tang-kuei and Peony Formula (*Dang Gui Shao Yao San*), which forms the basis of most treatments aimed at avoiding miscarriage-but the formula is intended to be used mainly as a daily preventive therapy rather than an emergency treatment. Extensive testing in the Orient indicates that this formula is safe to use and it appears highly effective; modified versions of this formula, such as Tang-kuei Formula (*Dang Gui San*), are used to address specific concerns and are probably of equal safety and efficacy. Other formulas, such as "*An Tai Yin*" (which means Peaceful Fetus Formula) and "*Shou Tai Wan*" (which means Fetus Longevity Pill) are popular remedies in China for use during the latter part of pregnancy.

ROLE OF ACUPUNCTURE

Chinese clinicians appear confident that most fertility problems can be overcome solely or primarily with the use of herbs; most medical books describing Chinese methods of treating infertility do not mention acupuncture. However, acupuncture therapy may address particular symptoms of concern either directly related or unrelated to infertility, and might be influential in speeding up the development of normal fertility. In the event that infertility is mainly due to functional disorders, it is possible that acupuncture alone could resolve the problem.