

Review of Mike Berkley's Seminar on 'East Meets West' in Reproductive Medicine

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Introduction

I recently attended Mike Berkley's seminar on reproductive medicine. Mike graduated in 1996 from Pacific College of Oriental Medicine—New York Campus. According to his bio he was the first acupuncturist in the U.S. to specialize in reproductive disorders. Part of the difficulty with this seminar is that the topic is so broad, and Mike tries and pretty much succeeds in covering a vast amount of knowledge. I am often frustrated with seminars which go into extreme depth with the Western side of the topic, and Mike did this to some extent, but I think we all agree that in order to help our patients the most we have to speak the language of their reproductive endocrinologists, and understand their conditions from both eastern and western points of view. Here's my synopsis, with my emphasis on acupuncture and herbal medicine, interesting facts that were new to me, and numbers that may be handy to have as a future reference.

Female hormone physiology

- **GnRH**—Gonadotropin-releasing hormone. The reproductive axis (the hypothalamus, pituitary, and the ovaries) is controlled by the hypothalamus with the release of GnRH, which causes the pituitary to release LH and FSH, the gonadotrophins. These in turn send a message to the ovaries to produce estradiol and progesterone.
- **LH**—Luteinizing hormone. LH surge in mid-cycle leads to ovulation. LH tells the corpus luteum to produce progesterone.
- **FSH**—Follicle Stimulating Hormone. FSH levels are a key gauge of fertility and ovarian reserve. When the ovaries have reserve and are responsive to FSH levels, the FSH levels are low. When the ovaries are running out of reserves, the pituitary has to scream at them to get them to ovulate, and FSH levels go up. Tests are done on day 3 of the cycle. Under 6 implies an excellent prognosis for fertility, and over 13 is considered very difficult to stimulate for ovulation.
- **Estradiol (E2)**—Estradiol is a form of estrogen and should be between 25-65 on day 3. Too high may indicate diminished ovarian reserve. FSH must be looked at with estradiol levels, as well. A low FSH level but with a high E2 level is also infertile. The FSH levels are being falsely suppressed by the Estradiol.
- **Inhibin B**.—This hormone also indicates ovarian reserve. High is good, low is bad, and may be an indicator for needing a donor egg. A normal result is anything above 45 pg/mL.
- **Progesterone**—Progesterone changes the shape of the lining to produce “endometrial milk”, to nourish the egg and make the lining “fluffy” for

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implantation. It raises the body temperature for biphasic cycle. At day 7 after ovulation should be 7-10 to show ovulation has occurred.

Fertility and Fertilization

- **What day is best for intercourse?** Sperm lives 2 to 5 days. It is best to start having intercourse one week before ovulation. If there is a low sperm count, it is best to have sex every day or every other day. The egg must be fertilized within 24 hours of ovulation, so it is best to get a head start.
- **Cervical Mucous**—When estrogen levels are high and progesterone levels are low right before ovulation, the cervical mucous becomes watery and the sperm can pass through more easily. Copious, stringy mucous is a good indicator of fertility.
- **Acupuncture around the time of fertilization**—It is safe to treat two hours after sex to help sperm get up to oviducts. Contractions of the uterus (including orgasm) help sperm to travel. This is also good after and IUI procedure.

Pregnancy and Recognition of Pregnancy by the maternal body

- **Purpose of giving acupuncture early in pregnancy**—In order to recognize and maintain a pregnancy, the mother's body needs to detect hCG from the embryo. The baby in essence saves its own life by telling the corpus luteum not to die and to continue to produce progesterone to keep the pregnancy. Acupuncture stimulates the blood flow to the embryo to help move hCG from the blastocyst to the corpus luteum.
- **Chemical pregnancies**, which are very early miscarriages just after a pregnancy has been detected on a pregnancy test, may be prevented by acupuncture. If the chromosomes are good but the blood flow inadequate, the embryo will not be able to send hCG to the corpus luteum.
- **hCG is only released after implantation.** It doubles every 48 hours. If hCG > 25 then a pregnancy is present.

The Uterus, Fallopian Tubes, and the Luteal Phase

- **Lining**—To increase the quality of the lining, may need to tonify Qi and blood.
- **Fibroids**—Don't try to treat fibroids. If they are large, they must come out surgically. If they are small, they are not interfering with fertility unless they are blocking the tube. Fibroids are always a result of estrogen dominance.
- **Polyp**—can cause infertility and should be treated surgically.
- **Fallopian tubes**—Tubal disease can prevent the egg from reaching the uterus. Patients should be tested with a hysterosalpingogram (HSG), which involves injecting dye into the tubes. Tubes cannot be fixed with oriental medicine if they are covered with endometrium and IVF may be necessary. However, 60% of hysterosalpingograms are false positive. Many positives are caused by a spasm of the tube, not an adhesion. If there are no adhesions, and if the tube is spasmed,

use acupuncture and shao yao gan cao tang. For spasms due to Stagnant Liver Qi and vacuity of liver blood, add xiang fu and dang gui. If a tube has an adhesion, IVF (with acupuncture and herbs) may be necessary..

- **Luteal Phase support**—You may need to supplement the Kidneys, assist yang and nourish yin. If implantation does not occur, progesterone (Yang) production stops and menses occur, yang becomes yin and the temperature drops.
- **Luteal phase defect**—If there is a monophasic cycle, meaning the temperature is not rising at ovulation time, or if the temperature goes down before 10 days after ovulation, suspect luteal phase defect. This is usually caused by deficient progesterone. Suspect a Vacuity of Kidney yang. Supplement the kidneys and warm yang qi. Use bu gu zhi, shan yao, ren shen, ba ji tian, sha yuan ji li, shu di, gou qi zi, chao sheng ma, chai hu. For acupuncture use Du-20, si shen cong, St-36, and moxa zi gong xue.

Infertility and associated factors, such as PCOS and Endometriosis

- **Polycystic Ovarian Syndrome (PCOS)**—Can be Kidney And Spleen Qi Deficiency With Phlegm And Damp Or Phlegm Congealing In The Liver Channel Or Lower Jiao, sometimes with Liver Qi Stagnation. You can use Liv-13, GB-26 to regulate the dai mai, Ren-17, and Lung 1 to descend lung qi, and ST-36, SP-6, SP-9, ST-40, KI-3, zi gong xue, ST-30, LI-4, LIV-3. Use herbs such as chuan xiong, xiang fu, shen qu , chen pi, ban xia, bai zhu, dang shen, fu ling, and include 400 mg of saw palmetto to combat the effects of too much testosterone.
- **Idiopathic infertility**—When there is no known cause according to western diagnosis for infertility acupuncture and oriental medicine can be of great help. Always use a differential diagnosis.
- **Big causes of infertility**—include stress, STDs, environmental toxins including smoking.
- **Galactorrhea**—fluid from the nipples. This can be caused by hyperprolactinemia, and can stop GnRH production from the hypothalamus, resulting in anovulation. Breast milk derives from KI essence and the channel through the nipple is yang ming, with relation to the chong mai. You should treat for rebellious qi in the chong mai channel. Hyperprolactinemia can be caused by stress which can reduced through the use of acupuncture. Acupuncture frequently normalizes prolactin by modulating stress. (Prolactin can also be caused by a tumor on the pituitary gland.)
- **Endometriosis**—Endometriosis is considered auto-immune disease. It can be Stagnation of Qi and Blood with Heat hidden in the interior. Always clear heat toxins. Heat in the uterus (caused by pro-inflammatory cytokines, produced by white blood cells) can disallow implantation. Look for lupis, or other auto-immune disorders. Differential diagnosis may also be Rebellious Liver Qi, Stasis of Blood with Heat-Toxin Trapped In The Interior. Blood follows the Liver Qi.

For acupuncture points use Liver 2, 5, 8, 14, GB-43, KI-2, SP-10, ST-36, 30, Ren-9, 6. For herbs use yu jin, dang gui, bai shao, mu li, wa leng zi, shui zi, tian kui zi, chuan lian zi, yan huo suo, sheng jian, zhi gan cao, da zao.

- **Premature Ovarian Failure**—This is indicated by high FSH levels. Oriental Medicine can help, but you may have to treat for up to two years. This can be caused by the immune system attacking the eggs. Treat as vacuity of Kidney essence. For herbs use You gui wan, fu zi, rou gui, lu jiao jiao, shu di, shan zhu yu, and shan yao, gou qi zi, tu si zi, du zhong, dang gui. For acupuncture use shu points on the Bladder channel.
- **Anovulation**—This can be an auto-immune condition or related to smoking. You need to regulate the Qi. Use jia wei xiao yao san. For acupuncture use St-36, Sp-6, four gates, zi gong xue, St-29, Liv-5, Kid-3, Du-20, Ki-1, Liv-13, Ren-12. NSAIDS can also inhibit ovulation.
- **Uterine artery impedance**—Studies show electro-acupuncture reduces blood flow impedance to uterine arteries, resulting in enhanced blood flow and an increase in take home baby rate. (Points used in the study were UB-23, UB-28, SP-6, and UB-57. For complete study see <http://humrep.oxfordjournals.org/cgi/reprint/11/6/1314>).

The mechanism-of-action of acupuncture in the treatment of female infertility resulting from poor blood flow to the uterus lies in the sympathoinhibitory effect of beta-endorphins resulting from acupuncture. Uterine blood flow increases, increasing quality of the lining and chance for implantation.

Importance of History

- **Need to include both male and female histories.** For the couple you need to know frequency of intercourse, use of lubricants, what kind, why is she dry? Are you in the mood? Is there enough foreplay? Is the lubricant killing the sperm?
- **Male evaluation**—Test for sperm quality and quantity
- **Female evaluation**—Menstrual cycle, stress, weight. Obesity increases androgens and estrogens. 10% weight loss increases fertility, so help her lose weight.

Ovarian Reserve

- **Low ovarian reserve**—This is indicated by high FSH levels and indicates poor egg quality and a low number of viable eggs still available for ovulation. We can't do anything to help ovarian reserve, but acupuncture can stimulate blood flow to the ovaries, and thus improve egg quality and reduce FSH levels.
- **FSH levels**—High FSH can be caused by poor blood circulation. Suspect Heart Qi vacuity, lung qi vacuity, spleen qi vacuity, Liver Qi stagnation, Kidney Qi Deficiency, Blood stasis or blood vacuity. The reproductive organs must receive the nutrients and cleansing benefits of good and plentiful Blood flow. Remember that the Kidneys store essence and dominate human reproduction; poor ovarian

function can mean Kidney deficiency. At FSH levels greater than 25 the patient may be encouraged to use a donor egg.

IVF

- **Oriental Medicine First**—It is always preferable for the couple to get acupuncture and herbal treatments for three to six months before a they go to the IVF stage, if possible and depending on the woman's age.
- **The IVF protocol**—includes both pre-embryo transfer and post embryo transfer treatments. Pre-transfer treatment is intended to be relaxing, so that the uterine artery dilates and promotes circulation to the endometrium for a healthier lining, i.e. we are trying to send more blood to the uterus. Post-transfer we are reducing uterine spasms to help implantation.
- **Pre-transfer treatment**—includes yin tang and ear shenmen, Ren 4, Ren 9, Ren 6, Ki 11, zi gong xue, st 30, Gb-26, St-36, Sp 8, Sp 6, four gates and estim from St30 to zi gong xue bilaterally for 25 minutes.
- **Post-transfer treatment**—should be uplifting, such as Du 20, si shen cong, Ren 14, Ren 6, St30, zi gong xue, Gb26, St36, and Ki 3. Use only these points twice a week for 13 weeks, until after the first trimester. Mike assures me that these points are safe to use when needled gently and with no deep insertion.
- **Male factor infertility, including vericocele and sperm abnormalities**—These topics may be in a future article.
- **Impotence**—Mike went on for a very long time about impotence. This topic may be covered in a future article. But for couples in a hurry to get pregnant, I believe that western methods of overcoming impotence would probably be used by most couples.
- **Implantation failure**—Even with a perfect lining of 10-12 mm implantation can fail due to lack of perfusion in the lining. Boost the Qi, nourish and quicken the blood, supplement the Kidneys and yang.
- **Miscarriage prevention**—Prevention of miscarriage due to an aneuploidic (i.e. too few or too many chromosomes) embryo cannot be stopped. Miscarriage due to lack of blood flow can be stopped, and acupuncture can help.

One more word of wisdom that I took away from this seminar: Take no credit. Take no blame. We are just here to help if we can.