

Editorial

This issue of the JAHG takes a new turn as we experiment with introducing themes. Along with a strong array of articles by leading herbal practitioners, including such topics as preserving traditional Cherokee ethnobotany, botanical treatment of Alzheimer's disease, and the use of botanical medicines in a harm reduction program for drug users in Oakland California, we present a collection of articles and case histories on the use of *Caulophyllum thalictroides* (Blue cohosh) in clinical practice.



Blue cohosh is used in this country and abroad by pregnant women to stimulate the onset of labor in late pregnancy lest women become "over-due" and face medical induction. Postdatism, now medically defined as a pregnancy that extends beyond 41 weeks gestation, is associated with increased risks to both mother and baby, including greater risk of difficult delivery, maternal hemorrhage, and stillbirth due to increased fetal size, greater ossification of the fetal skull, and decreased placental function. The incentive to avoid postdates pregnancies has led obstetric protocol to change. The permitted duration of pregnancy has become shorter (it was, until recently, 41.9 weeks gestation), with medical induction frequently initiated shortly after the due date. Labor induction rates have doubled in the past 15 years with as many as 18 percent of all births now being medically induced. The methods for induction include intravenous administration of the oxytocic drug pitocin, and oral or cervical administration of prostaglandin based drugs such as misoprostel and cervadil. It is well documented that these drugs significantly increase rates of maternal tachysystole, fetal tachycardia, fetal distress, uterine rupture, and increase the need for epidural anesthesia and cesarean section.

Interestingly, and in contrast to blue cohosh which has a long record of historic use as a partus preparator and labor augmenting herb, synthetic oxytocin was not even isolated until 1954. Misoprostel, sold under the trade name Cytotech, has only been in use obstetrically for several years, and is used entirely "off-label" for the induction of labor (it is a prescription medication for stomach ulcers), sometimes with dire maternal-fetal consequences. It is fully understandable why pregnant mothers and concerned midwives and herbalists want to help women avoid the problems associated with the medical induction of labor.

But is the use of blue cohosh for this purpose safer? Although contraindications and risks associated with herbs such as ginkgo and St John's wort have been widely publicized, blue cohosh has received little critical attention from herbalists and midwives, despite concerns that it is associated with risk to the fetus when taken by pregnant women. Yet there is ample evidence that blue cohosh does contain cardioactive components that may have deleterious effects on the unborn or neonate. This has been documented in

several cases involving the use of blue cohosh by pregnant mothers and corresponding cardiovascular disease in the newborn. There is also abundant clinical evidence that when used correctly with appropriate monitoring by experienced professionals blue cohosh can be used safely and effectively.

It is important for herbalists and alternative medicine practitioners to remain open-minded and diligent in our willingness to integrate new information into our clinical approaches. It is also important to remember that while most of us rarely see adverse reactions (ADR's) to herbs in our practices, even very large practices generally do not provide a sample size of clients large enough to provide statistically significant ADR data.

In this issue we are pleased to present a number of case histories from leading women in botanical medicine practice including Mary Bove, ND and midwife, Dr. Robin Dipasquale, ND, and Dr. Jill Stansbury, ND, as well as an article on blue cohosh and neonatal cardiac complications by Tieraona Low Dog, MD, midwife and herbalist.

We also bring to you the results of the AHG Vitex Survey, the first in an ongoing series of clinical surveys we plan to publish. This survey project is intended to compile clinical data on herbs commonly used by herbal practitioners in the United States. Our thanks to the AHG professional members who took the time to complete these extensive surveys. Look for the results of the Echinacea and Kava surveys in the next issue, in which the major theme will be constitutional western herbal medicine.

In health,

Aviva Romm

Blue Cohosh



Francis Brinker

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by Francis Brinker, N.D.

Appearance and distribution

Though *Caulophyllum thalictroides* is usually referred to as blue cohosh root, it is actually the dried rhizome with its attached roots that is used as a medicine. The rhizome is from 2 - 6 inches long and a quarter inch thick and is covered with many small fibrous roots. The plant itself grows about two feet high. It has one or more stems with a few compound leaves and inconspicuous greenish yellow flowers that appear in April. The leaves appear to be a continuation of the stem from which the plant gets its designation "caulophyllum" (stem—leaf). The naked, globular seeds are a deep blue color.¹

A few plants usually grow together but not in patches. They are found in open woods at the base of trees and other shady locations with rich soil. This North American plant's northern range is from southeastern Canada (though sparse in New England states), through the Midwest, west to the Mississippi River, and south to where it is abundant in the Allegheny Mountains of the southern states.¹

Early names and uses

The first published record of the plant was by Gronovius in 1739 in the *Flora Virginica* where it was identified as *Leontice foliis supra decompositis*. In 1741 in the *Species Plantarum* Linnaeus identified it as *Leontice thalictroides*. However, in 1803 a description of plants collected by the elder Michaux in America, the *Flora Boreali - Americana*, created the new designation *Caulophyllum thalictroides* for this plant, based upon the distinct type of naked fruit produced by this species. Soon thereafter, Nuttall, Pursh, Barton, Eaton, and other American authors adopted this nomenclature, though the distinction remained controversial in Europe for some time.

This American remedy, like most others, was utilized by members of indigenous Indian tribes long before the appearance of Europeans on this continent. It has been said that the still-popular common name of blue cohosh derives from the Algonquin term "cohosh" applied to the plant, meaning "it is rough (with hairs)", and given by the Montagnais of Canada to the bristly fruit of *Rubus lacustre*. Whites later used this term for several unrelated plants, smooth in all their parts, that had similar uses.¹

A number of Native American tribes had similar uses for the root. A common application was for

gynecological problems. The Fox, Menominee, and Potawatomi Indians made a decoction of the root to remedy profuse menstruation. The Cherokee and Potawatomi used it as an aid for childbirth. The Cherokee also relieved uterine inflammation with the root, while the Ojibwa used the root for stomach cramps associated with painful menstruation. Both the Iroquois in the north and the Cherokee in the south used it for rheumatism. The Fox and Mohegan decocted the root for a urinary remedy. The Iroquois, Ponca, and Omaha considered the root decoction highly effective for fever of all types. Other uses varied from tribe to tribe. The Cherokee gave the roots for fits and hysterics, colic, nerves, and applied it locally for toothache. The Chippewa used it for stomach cramps and indigestion, for bleeding from the lungs, and as an emetic.²

To the "Indian Doctor" Peter Smith, belongs the credit of introducing this remedy to Euro—Americans. He designated it as blue-berry root, or sore throat root.³ Later, this plant became confused with his description of "squaw root" which it somewhat resembles.¹ Peter Smith's squaw root was actually *Cimicifuga racemosa*, the black cohosh or black snake root, which has similar applications to *C. thalictroides*.^{3,4} Due to *caulophyllum*'s benefits during labor, squaw root became, along with the appellation "papoos root," another common name for this plant in 19th century America.¹ Besides its use by Native American women during labor, as well as 2 —3 weeks before, Peter Smith reports that it was effective for treating uterine inflammation.³

The Eclectic writers from Rafinesque and Beach onward recognized *Caulophyllum* as a valuable remedy. It became popular with Eclectics after its endorsement by John King in his *Eclectic Dispensatory* in 1852. However, it was not recognized in regular medical literature until its appearance in the appendix of the 12th edition of the *United States Dispensatory* in 1865.¹ It was finally introduced into the *United States Pharmacopoeia* in 1880 and was retained in the next edition in 1890, after which it was dropped.⁵ It then received scant attention from regular practitioners and remained exclusively an Eclectic and homeopathic remedy.¹

Early Eclectic Obstetric Reports

One of the "resinoid" concentrations popular with early Eclectic doctors was an extract from *C. thalictroides* designated as "caulophyllin." Caulophyllin was a dried, powdered concentrate of the alcohol

extract made from the dried powdered rhizome and roots.¹ Dr. Grover Coe promoted it as a parturifacient of considerable repute. A report of its use in the difficult labors of three women illustrate its usefulness.⁶

The first case in January of 1864 was a women giving birth to her sixth child. After laboring all night with increasingly forceful and frequent contra tions, the labor was not advancing. The doctor arrived at 6 a.m. Staying in bed nearly al day did not improve the woman's progress, though the child's presentation was normal. At 10 p.m. three grains of caulophyllin were given with sugar and repeated in half an hour. After the third dose the contractions became much stronger and the child was born twen y minutes before midnight.⁶

The next month another women was in labor with her fourth child. She had been in bed for a week to ten days due to her pelvic discomfort. The labor had gradually progressed for twelve hours. Since the labor began she vomited ev ery few minutes, and she fainted during every contraction over a 2-3 hour period. She believed she was going to die. On his arrival the doctor administered the same dose of caulophyllin as above in a small quantity of water In half an hour he gave the second dose, and in less than half an hour following she delivered a healthy child. Her recovery was rapid following the birth.⁶

In March of 1864 the third woman was in labor with her fourth child. Her previous deliveries had been very quick. Being a Nativ American woman, she was assisted by tribal attendants, but after twelve hours no progress was being made Summoned in haste, the doctor found the contra - tions were strong and frequent, but labor was not advancing. She was given caulophyllin in the same dose as above every half hour. After the second dose delivery was completed. Though the mother did well, the child was stil - born⁶

Prior to 1910 one doctor documented 100 cases of labor and delivery using caulophyllin. In many of these cases other appropriate agents were employed in conjunction with caulophvllin. One sixth grai was given every fifteen minutes in hot water. The force and frequency of uterine contractions were significantly increased in 75% of the cases from 30-60 minutes after the first dose. Only a slight increase in contractions occurred in 10%, and no noticeable change was observed in 15%. Labor generally terminated in 1.5-6 hours, though severa went 10-14 hours. Forceps were used in about 20% of the cases. Three occiput - posterior, one face, and four shoulder presentations were experienced, but

no negative consequences followed. In 20% an hour elapsed before expulsion of the placenta and membranes. Postpartum hemorrhage was noted in about 30% (profuse in 10%). necessitating kneading and often requiring ergot. Hemorrhage was usually associated with the concurrent use of chloroform o with obesity of the mother. Afterpains were sometimes severe in nervous, lean women.⁷

From his experience with deliveries such as thes John M. Scudder also appraise *C. thalictroide* as an effective parturient. stimulating labor by coordi - nated the muscular contractions and increasing their power. For this he employed either the infu sion, the fluid extract, or a tincture of the recently dried root made with eight ounces of the root in one pint of 76 proof alcohol.⁸

The Lloyd Brothers Manufacturers isolated from caulophyllum its major active glycosidal constituent and produced a 1% solution of this principle which they designated as leontin.^{9,10} It had saponin-like properties (frothing when shaken in solution) and was soluble in alcohol but insoluble in water Leontin precipitated immediately when water was added to the alcoholic extract.¹ This product was used by one doctor in four cases of confinement, giving one half teaspoonful in sweetened water in a single dose after the child's head was engaged. In each case the labor ended in from 10-20 minutes, rather than 1-6 hours as expected. The mothers were pleased not only with the promptness of deliver but with the reduction in pain which they expe - rienced.⁹

B\ the end of the century Eclectic authors consid - ered blue cohosh one of the best uterine stimulants for use before, during, and after labor and delivery. The consensus was that the strengthened contrac - tions mimicked normal uterine contractions with proper intervals and did not exceed appropriate intensity or duration. Caulophyllum was effective i those cases where the labor was delayed by weak - ness or fatigue. It did not produce violent, constant tonic contractions like ergot.^{8,10,11} A specific mani - festation in nonprogressing labors that responded well to blue cohosh was the rigid os, for which ten drops of the tincture were given every half hour.¹²

Blue cohosh could be used prior to labor to relieve the pains of false labor. Caulophyllum was effective in relieving many cases of after pains following delivery. as well.^{7,10,11,12} In both of these conditions



**Blue
Cohosh**

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it was recommended by Dr. Eli Jones to be used in the first decimal dilution. 4-5 drops being given every two hours.¹²

Gynecologic application

The concentrated principle leontin was used by thousands of physicians in the late 19th century.¹⁰ A favorite application of the glycosidal derivative leontin was as an emmenagogue. Suppressed or scanty menses responded well to treatment with leontin. In four cases attended by three different doctors where menstruation had stopped after exposure to the cold, leontin helped re-establish the menstrual flow. In cases of amenorrhea physicians reported quick success with leontin where other remedies had failed. One physician used leontin in three patients with amenorrhea following menarche; in each case the period began in from 3-6 days. Another physician treated a 22-year-old woman who hadn't menstruated since age 16, and her period began in about two weeks after taking one half teaspoonful of leontin 3-4 times daily. A case of amenorrhea following typhoid fever in a 19-year-old failed to respond to treatments by four physicians until leontin was employed, although it took two and a half months. Leontin was also used to treat dysmenorrhea.⁹

Blue cohosh itself was considered unsurpassed as a botanical extract for treating amenorrhea and dysmenorrhea, particularly in cases caused by uterine congestion.¹¹ Symptoms that pointed to caulophyllum as an indicated remedy were uterine pain with weight and fullness of the pelvis and abdomen and pain in the legs. It was of use in cases of uterine displacement, whether anteversion, retroversion or prolapse, as well as symptoms associated with subinvolution.¹⁰ At menopause caulophyllum was known to help reduce many of the common symptoms, especially restlessness with burning heat of the extremities.^{11,13}

Caulophyllum was also given to control uterine hemorrhage. In postpartum hemorrhage ten drops of the tincture given every half hour would "cause firm contractions and arrest the flooding."¹² Together with hydrastis, caulophyllum was given for menorrhagia, metrorrhagia, and excessive menstruation.¹¹

Problems outside the female reproductive system

Blue cohosh was also used in irritation of the bladder in women.^{10,11,13} In these cases, there was a constant desire to urinate but only small quantities passed. Dysuria was typically felt in the neck of the bladder. When pelvic congestion was associated with this condition, as well as pain in the rectum, caulophyllum

worked well.¹¹ Backache associated with pelvic congestion was promptly relieved. Doses were usually small and frequent.¹³

For pulmonary conditions in which there was shortness of breath, as in asthma and bronchial congestion, caulophyllum had a calming and soothing influence.¹³ For restlessness and insomnia, especially in nervous women, it was also an excellent remedy.^{10,13} For fevers in children small doses were given frequently to relieve the discomfort.¹³

Identification of constituents from the roots and rhizomes

Besides isolating and selling the compound from *C. thalictroides* roots and rhizome that he named leontin, John Uri Lloyd also extracted an alkaloidal substance he called caulophylline. Previously, the presence of an alkaloid had been controversial, since F. F. Mayer had obtained a positive reaction for the presence of alkaloids (Mayer's Test) in 1863. In 1864 A. E. Ebert was unable to isolate an alkaloidal component, and inferred that Mayer's sample must have been contaminated.¹ Using roots and rhizomes of blue cohosh obtained from Lloyd, in 1913 F. B. Power and A. H. Salway obtained a pure crystalline sample of the alkaloid. Tests showed it to actually be methylcytisine, a name used for the compound before Lloyd had mistakenly termed it caulophylline. Methylcytisine, present in caulophyllum at 0.033—0.090%, is soluble in water and alcohol.^{14,15,16} Besides methylcytisine, other alkaloids including baptifoline 0.020-0.075%, anagrine 0.012-0.019% and magnoflorine 1.100-1.108% were later isolated from the roots and rhizomes.^{15,16}

Power and Salway were able to correct and completely characterize the formula of the compound which Lloyd called leontin. They therefore renamed it caulosaponin. Caulosaponin was insoluble in water but moderately soluble in alcohol, especially when heated. The rhizome and root yielded 0.296% of this compound. Another saponin, designated as caulophyllosaponin, was also isolated and characterized by them. It is extremely soluble in alcohol and insoluble in water. The caulosaponin and caulophyllosaponin were present in the commercial product known as caulophyllin.¹⁴ Another unnamed saponin was isolated at a later date.¹⁴ Hydrolysis of caulophyllin and the other two saponins yields the aglycone hederagenin.^{18,19} Other constituents identified in caulophyllum roots and rhizomes

in 1913 included citrulin and a phytosterol.¹⁴ The phytosterol was identified as daucosterol in 1982.¹⁸

Activity of blue cohosh and its constituents

The earliest published *in-vitro* study using blue cohosh showed that strips of uterine muscle from guinea pigs were stimulated to contract by a 1:2000 dilution of the fluid extract, while the infusion was inactive.²¹ The hot water extract from *C. Thalictrifolia* roots and rhizomes exhibited a uterine stimulant effect on isolated rat uterine muscle. The total alkaloid fraction showed a uterotonic activity *in vitro*, but the isolated alkaloids were not active at the concentrations tested.¹⁸ However, methylcytisine did stimulate smooth muscle *in vitro* using preparations of isolated small intestine from a rabbit²⁰ and ileum from a guinea pig.²⁰ It also led to an increase in respiration and blood pressure in separate animal tests.^{20,22} Methylcytisine was shown to bind to nicotinic receptors in an *in vitro* test using porcine brain membranes.²³

The total saponin fraction and an isolated saponin from blue cohosh exhibited the same type and magnitude of *in vitro* uterotonic activity as exhibited by the hot-water extract on isolated uterine muscle from the rat.¹⁸ One of these isolated alcohol-soluble saponin glycosides, apparently identical to leontin/caulosaponin, produced an increased rate and degree of contraction in uterine tissue *in vitro*. Large doses increased the underlying tone and rate of uterine contraction but decreased the extent of contraction. These *in vitro* results were obtained with tissue from the rat, rabbit, and guinea pig. Tests done *in situ* with intravenous administration (5 mg/kg) of the saponin in the rat produced increases in the rate and degree of contraction. Larger doses (8-10 mg/kg) here caused an increase in tone and rate and a decrease in height of contraction, much like the *in vitro* results. The tone was maintained for about 45 minutes. When tested *in vivo* in rats using 8-10 mg/kg, similar but smaller tonus changes were found as with the *in situ* test. Besides its oxytocic effect, the saponin also stimulated contractions in the smooth muscle of intestinal strips obtained from the rat, mouse, rabbit, and guinea pig.²⁴ A mixture of caulosaponin and caulophyllosaponin produced a mild purgative action when given orally to small cats.¹⁴ In addition, caulosaponin had a constrictive effect on rat coronary vessels and cattle and hog carotid arteries.²⁴ The saponin aglycone hederagenin injected

intraperitoneally had 50 stronger anti-inflammatory activity against carrageenin-induced edema in rats than i.p. sodium salicylate at only 40% the dose of the salicylate.²⁵

Recent concerns

Using large amounts of blue cohosh extract in an attempt to induce abortion has led to nicotinic toxicity in at least one case. Elevated temperature, blood pressure, pulse rate, and respiratory rate accompanied sweating, muscle fasciculation and weakness, and sinus tachycardia in the absence of any observable oxytocic activity.²⁶ *In vitro* research with rat embryo cultures showed embryotoxicity of a novel alkaloid component, caulophyllamine, as well as teratogenic effects leading to neural tube defects from methylcytisine.²⁷ The appearance of birth defects in puppies and a human newborn whose mothers had consumed goat milk presumably high in anagyrine (leading to abortions of malformed fetuses in the goats, as well)²⁸ suggested potential risk for the children of pregnant and lactating mothers. One case report of cardiomegaly in a newborn was associated with the mother's use of three times the recommended dose of blue cohosh during the last three weeks of her pregnancy.²⁹ However, the suggestion that use of blue cohosh during labor may have contributed to newborn distress³⁰ was dismissed due to lack of convincing evidence.³¹

Summary

Caulophyllum was a popular remedy with Native Americans and early Eclectics because of its uterotonic influence before and during labor. Its saponin components were found to strengthen uterine contractions, and they were successfully used in concentration at times as a substitute for the crude extract. The tonic effects of a hydroalcoholic extract and the isolated saponin called leontin or caulosaponin led to clinical applications outside of pregnancy to influence uterine activity. The vasoconstrictive effects of caulosaponin were likely responsible for the positive results in treating various types of congestive pelvic disorders. Nicotinic effects of the alkaloidal components may be responsible for some of the antispasmodic applications traditionally associated with its use, such as for intestinal or uterine cramping. Concerns over excessive uterine stimulation and potential toxicity contraindicate its use in large amounts during pregnancy.

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Jieraona Low Dog

Blue Cohosh and Neonatal Myocardial Toxicity

by Tieraona Low Dog, M.D., A.H.G.

Blue cohosh (*Caulophyllum thalictroides* (L.) Michx) is an attractive perennial that can be found growing throughout much of the eastern and central United States in moist, rich soil. Blue cohosh, also known as squaw root (a term no longer used because of its derogatory connotation), was said to be highly valued by indigenous women for hastening a long parturition. It was official in the United States Pharmacopoeia from 1882-1905 for labor induction. Today the herb is primarily used as a partus preparatory, anti-spasmodic and emmenagogue.

Concerns over the safety of blue cohosh during the third trimester of pregnancy arose in 1996 when a report of myocardial toxicity in a newborn was published in the New Zealand Medical Journal (Gunn 1996).¹ The mother had been taking a combination of herbs that included blue cohosh and black cohosh (*Cimicifuga racemosa*) prior to birth. The report suffered from failure to report dosage, full description of the herbal preparation ingested and length of usage. No clear link could be made between the birth anomaly and herb use. Then in 1998, another case report of myocardial toxicity in a newborn was reported in the *Journal of Pediatrics* (Jones, 1998).² The case report states a 36-year-old gravida 4, para 3 woman without significant medical history who had received appropriate prenatal care from a midwife was advised to start taking blue cohosh tablets one month prior to her due date to help induce uterine contractions. The mother took one tablet three times per day for 3 weeks during which she noticed increased uterine contractions and decreased fetal movement. (The midwife had advised her to take one tablet per day.) No drugs, alcohol, tobacco or other over the counter remedies were consumed. She gave birth to an 8.05 pound baby (3.66 kg) at 41 weeks following the spontaneous onset of labor. After one hour of labor the infant was delivered precipitously with apgars of 6 and 9. The infant became cyanotic and required intubation and mechanical ventilatory support within 20 minutes of delivery and was transferred to an appropriate newborn intensive care unit for evaluation and treatment.

An electrocardiogram revealed an acute anterolateral myocardial infarction. Further evaluation revealed pulmonary edema and cardiomegaly. Liver function tests were abnormal with elevated aminotransferases consistent with shock that returned to normal within ten days. After 31 days of hospitalization, the child was discharged and he remains on digoxin therapy 2

years later. The authors believe that all other causes of neonatal myocardial infarction and cardiogenic shock were excluded and that the profound congestive heart failure was due to the maternal ingestion of blue cohosh.

While this case report certainly raises concerns about the use of blue cohosh during pregnancy there are problems with the details that make any definitive conclusion difficult. First and foremost, the product was not evaluated for appropriate identification of the botanical ingredient(s). There is no dosage provided for the herb. "One tablet taken three times per day" is relatively meaningless – how many mg were in each tablet? Was the herb taken alone or in combination with other herbs commonly found in partus preparators?

There is no question that blue cohosh contains some potentially harmful constituents. The plant is featured in standard textbooks on North American poisonous plants, and children have been poisoned by the berries.^{3,4} The rhizome is known to contain the piperidine alkaloids, N-methylcytisine, baptifoline and anagyrine. N-methylcytisine has peripheral effects similar to nicotine.⁵ Toxic effects include coronary vasoconstriction. Tachycardia, hypotension and respiratory depression, and Rao et al reported a case of nicotinic toxicity in a woman who attempted to induce an abortion by ingesting large quantities of a tincture of blue cohosh along with slippery elm tea.^{6,7} Concentrations of N-methylcytisine ranging from 5-850 ppm have been found in dietary supplements containing blue cohosh.⁸ In-vitro studies have demonstrated that extracts of the whole rhizome or pure N-methylcytisine (at 20 ppm) induce major malformations in cultured rat embryos at concentrations of 20 ppm⁹; however, neither the National Institute of Environmental Health Sciences nor the Environmental Protection Agency recognize this test as an appropriate screen for human reproductive risk.

Another constituent of the plant, the quinolizidine alkaloid, anagyrine, has been associated with toxicity and teratogenicity in livestock.¹⁰ The congenital deformity that occurs after maternal ingestion of anagyrine in lupine is called "crooked calf disease". While anagyrine is a known teratogen in livestock, it is unclear if it is teratogenic in humans. Some researchers have postulated that the teratogenic effects only occur after metabolism by microflora in the ruminant gut. One case report in the literature describes an infant born with skeletal dysplasia and vascular anomalies after maternal consumption of

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Anagryne-containing goat milk.¹¹ Anagryne is present in blue cohosh rhizome at a concentration of 2-390 ppm.⁸ Researchers at the FDA have recommended that pregnant women avoid ingesting any amount of anagryne until more is known about its potential teratogenicity in humans.⁸ The American Herbal Products Association's *Botanical Safety Handbook* categorizes blue cohosh as a "class 2b" herb (not to be used during pregnancy because of its potential abortifacient activity but goes on to state that *Caulophyllum* may be used (in small doses) as a parturifacient near term to induce childbirth under the supervision of a qualified practitioner.¹²

Despite the shortcomings of published case reports, the chemistry and pharmacology of the plant are reasonably well known. The human case reports, flawed as they are, paint a picture that is consistent with the evidence provided by the in vitro and animal studies.

Blue cohosh also contains the glycoside caulosaponin, which has been shown to constrict coronary vessels and exhibit oxytocic effects in vivo.¹³

What does this all mean? Studies of isolated constituents in-vitro and in vivo provide intriguing insights into understanding the pharmacology of a botanical, however there are many factors that one must account for when considering the potential benefit or toxicity when whole herb is taken orally by humans. Was the herb accurately identified? What method of extraction/administration was used? How well are the constituents absorbed across the gastrointestinal barrier? How are the constituents metabolized and excreted? What is the serum concentration of key constituents when the herb is taken in the usual and customary manner and how well do they cross the placental barrier?

Teratogenicity can be hard to identify as hundreds of babies must be carefully examined and followed to identify even a small increased incidence of birth anomalies. Fetal alcohol syndrome (FAS) is a classic example. FAS has been present for hundreds, if not thousands, of years and yet the association of alcohol consumption during pregnancy to this syndrome was not recognized until 1972. Was blue cohosh responsible for the myocardial infarction and congestive heart failure that occurred in the infant whose mother purportedly consumed blue cohosh during her final month of pregnancy? One simply cannot say. While animal studies would help clarify the question of teratogenicity. While abnormal birth outcomes in animals will not exactly predict the risk in humans, the absence of birth anomalies is a very reassuring finding.

Despite the shortcomings of published case reports, the chemistry and pharmacology of the plant are reasonably well known. The human case reports, flawed as they are, paint a picture that is consistent

with the evidence provided by the in vitro and animal studies. Should herbalists recommend blue cohosh as a partus preparator during the last 3-6 weeks of pregnancy? Are partus preparators even necessary? And why give an herb to increase uterine contractions 30 days before the baby is even due to arrive? Women are quite capable of bringing babies into the world without taking herbs or drugs to "prepare" for the event. Psychological/spiritual preparation seems far more important for the journey of birth than pharmacological (herbal or otherwise) interventions. One must be careful not to reduce childbirth to a pathology that must be "medically managed" by the herbalist, midwife or physician. Given the question of toxicity, it seems wise to err on the side of caution and either avoid blue cohosh during pregnancy or use only once labor has commenced when a mild oxytocic agent is deemed necessary.

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Case History File: Blue Cohosh Varicosities and Pelvic Congestion

by **Jillian Stansbury N.D.**

A 44 year woman came in describing a vein that would become aching, tender, and painful for about 10 days a month in relation to her menstrual cycle. A vein on the medial side of her right calf would swell premenstrually and create a notable lump about an inch and a half long, and then would subside and become entirely invisible after the menses. She reported that this same vein gave her some difficulty during her only pregnancy 25 years ago, but had resolved after delivery and not bothered her since, until it recurred 6 months ago. She described the pain as an aching, heavy, and full sensation, that was worse with prolonged standing and better elevating her leg.

Drug/Supplement History No pharmaceuticals including oral contraceptives were being used.

Herbal and nutritional supplements were used only occasionally for acute colds.

Family History Her 70 year old mother has varicose veins of the lower legs. Negative family history for thrombi, phlebitis, clotting disorders.

GI She reports a regular and comfortable bowel function, but a tendency toward constipation with eating too many of the sweets and starches she enjoys. No constipation presently. No gas or bloating, normal bowel sounds, and soft, non-spastic, non-tender intestines with palpation. There is no organomegaly or inguinal lymphadenopathy.

Reproductive Gravida 1, Para 1 The patient experienced regular cycles without significant emotional disturbance or excessive bleeding, but did complain of breast tenderness, aching in the back and pelvis, and of course the chief complaint of aching in the right medial calf prior to and with menses.

She had normal pap smears her entire life. A pelvic exam performed at the first appointment revealed mild uterine prolapse, weak pubococcygeal muscles and slightly pale to grayed mucousal tissue, but an otherwise normal exam without signs of infection or inflammation. The uterus was midline, non tender, and non enlarged without noted fibroids or asymmetries, and there were no adenexal masses, or adhesive areas. No vaginal, labial, or rectal varicosities were present.

Cardiovascular Her blood pressure had been consistently around 125/85 for over 5 years, with normal blood lipids on one check 3 years prior. A reading of 126/88 was recorded at the initial appointment. Mild varicose veins of both lower legs and popliteal regions were present and worse on the right.

Pulses were detectable in the ankle and distal foot and there was no deep vein tenderness. The area of the calf pain displayed no heat or redness, and no masses in the tissue. No discoloration nor change in the overlying skin were palpated or observed. No pitting was noted in the ankles or pretibial regions, though they appeared full and doughy.

Nervous The patient slept well, maintained a cheerful demeanor and denied difficulty with anxiety, depression or fatigue.

Endocrine Negative for endocrine pathologies. No personal or family history of diabetes, thyroid disorders, or other hormonal symptoms or diagnoses.

Psychosocial The patient had been divorced once and was presently remarried, with her 2-year-old daughter living on her own. She reported a happy and comfortable relationship where her husband worked full time, and she did all the cooking and cleaning, domestic chores, and directing of the hired labor on her 40 acre blueberry farm. She worked part time from her home in the country, exercised by walking her dog and gardening. She was 15 to 20 pounds overweight by her own estimation, and wished to be in better physical shape. She did not smoke or drink alcohol, and ate a fairly healthy diet cooking almost all meals from scratch at home.

Assessment

I was not immediately concerned about phlebitis, although the potential for an increased future risk of this and thrombi were discussed. The pain appeared due to vascular engorgement of the medial and superficial calf veins. The weakened vein walls in this region were prone to distention, especially when subjected to the increased venous pressure that can frequently accompany vascular congestion in the pelvis prior to menstruation.

Treatment

General

Move as much as possible. Avoid sitting in standard chairs, sitting with legs crossed, favoring postures that better facilitate pelvic circulation. Walking, yoga, upside down postures, squatting postures for gardening, and toning the abdominal, pelvic, PC, and muscles in general were supported, and specific exercises were taught and practiced.

Dietary

I suggested she consume liberal amounts of garlic and onions and other spices known to improve blood lipids, platelet aggregation and activity, an



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reduce fibrin deposition in the vein walls, all contributing to loss of elasticity and an increased tendency toward endothelial inflammation. Such spices include tumeric (Curcuma), Chili and other peppers (Cayenne species), and Ginger (Zingiber).

Blueberries and other foods high in anthocyanin pigments were discussed and additionally encouraged. We discussed how, over a lifetime, such habits could possibly reduce further worsening of her varicose veins, reduce the risks of clots, and perhaps a worsening of her blood pressure and cardiovascular disease risks.

We also discussed aiming for as much raw food, fiber, and liquid as possible, while minimizing sugar, breads, pastas, and refined carbohydrates, as these tend to slow intestinal transit time and contribute to increased pressure within the intestinal lumen.

Botanicals

I dispensed a tincture of equal part *Hamamelis virginica*, *Angelica archangelica*, and *Caulophyllum thalictroides*. Dose: A dropperful (~1/2 tsp) 2-3 times each day all month long increasing to 5 times a day premenstrually.

Vaccinium — in the form of daily blueberries.

She noted an improvement with this approach with the very next menstrual cycle, experiencing less pelvic pain and virtually no calf pain. The affected vein was engorged and palpable, but less so than the previous month and was not accompanied by pain. Her blood pressure was noted to be 122/80 at the second appointment 30 days after beginning the treatment, and 118/76 120 days after beginning the treatment. We continued the tincture formula for 4 months, reducing the dosage incrementally each month, with follow up visits occurring 1 month after the initial appointment and another 3 months after that, at which time the formula was discontinued. During this time she had increased her walking, improved her diet and lost 6 pounds.

I saw this woman approximately yearly for routine Pap smears and check-up and found her blood pressure to be maintained around 120/80. and her pelvic congestion to have remained improved. We worked together again some 7 years after our first meeting. at the time of her menopause, at which time she reported the calf pain had not bothered her since, and the varicose veins had not worsened, but were in fact somewhat improved.



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Dysmenorrhea, PMS, and Musculoskeletal Complaints

by Robin Dipasquale, MD.

Ms. C. a 33 year old woman. came to my office in February 1998 with chief complaints of painful menstrual periods, PMS, and musculoskeletal pain. She had a history of painful periods since menarche at age 13 and was diagnosed with endometriosis in 1986. followed by laser surgery. Over the years since the surgery, the symptoms have been intensifying. At the time of the office visit, she reported extreme spasms and cramping with the menstrual flow throbbing vaginal and vulvar pain and a sense of being overwhelmed with pain by the end of each cycle. She bleeds for two days, stops, then bleeds another 5 days, passing multiple clots. Just after bleeding until ovulation occurs, she feels good, with a positive outlook toward life. From ovulation until the menses begins, she feels irritable, desperate. overwhelmed and a sense of rage. Ms. C. reported that she has a general discomfort in her body in the neck, shoulder, gluteals and SI joint. She also has hip, knee and ankle joint pain. This worsens with exertion. She feels this is emotional/spiritual as well as physical. There is a sense of fatigue and exhaustion most of the time. Her sleep is disturbed, waking in the night and not able to fall back to sleep. Both the sleep and the musculoskeletal symptoms are worse after drinking alcohol.

Drug History: Amitriptyline (past two months at bedtime to help her sleep), Ibuprofen, monthly for pain relief during menses (for many years).

HEENT: recurrent sinus infections during the wet winters.

Gastrointestinal: history of IBS, not currently present. Bowel movements daily with occasional constipation.

Breasts: tenderness premenstrually.

Endocrine: history of hypoglycemic episodes over past three years.

Hematology: history of iron deficiency anemia three years ago.

Ms. C. loves to be in the alpine meadows hiking and scrambling. She loves the open space. "Everything is okay when I'm there, I can just be." Her physical complaints are primarily on the right side. She has a degree in occupational therapy and a certification in massage therapy but prefers to work with computer doing detailed analytical work over working with people

Treatment

General

- Castor oil treatment three times/week over the pelvic region (castor oil applied topically, overlaid with a hot water bottle for 30 minutes)
- Epson salts baths (1 cup salts per bath) with lavender oil (5 drops) at bedtime to assist with sleep.
- Polarity therapy sessions one time every two weeks for four sessions

Dietary

Follow the anti-estrogenic diet as closely as possible to decrease exogenous estrogenic sources.

- Decrease fats, especially saturated animal fats and use instead unsaturated fatty acids, focusing on omega 3 and omega 6 oils, such as those found in cold pressed vegetables and fish oils
- Eliminate sugar, white flour, and all refined foods.
- Eliminate all methyl-xanthenes: caffeine, theophylline, theobromine (e.g. coffee, tea, chocolate, cola).
- Eliminate red meat and fowl (sources of exogenous estrogens). Organic fowl is acceptable.
- Decrease / eliminate milk and dairy products (sources of exogenous estrogens).
- Yogurt is acceptable. Increase complex carbohydrates (e.g. vegetables, whole grains. etc.)
- Decrease cabbage family foods (e.g. cabbage, brussels sprouts, broccoli, cauliflower etc.) (thyroid antagonists).
- Increase eggs, garlic, onions, and beans (sulfur containing amino acids especially L-cysteine).
- Increase antioxidants to increase the detoxification of estrogen (vitamins C, E, and selenium).
- Anti estrogenic smoothie with kelp (1/4-1 tsp.), granulated lecithin (1-2 Tbsp.), yeast (1-2 Tbsp.), an egg or protein powder, fruit, soaked flax seeds (2 Tbsp.) and yogurt once a day for breakfast if possible.

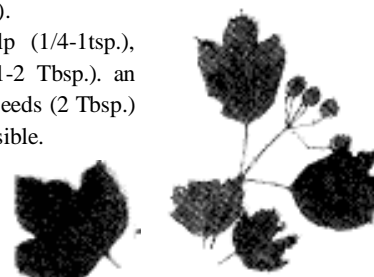
Botanical

Vitex capsules, one cap in the am. daily to engage the pituitary gland.



Robin Dipasquale

Robin Dipasquale N.D., an herbalist and naturopathic physician, embraces the scientific, spiritual and humanistic applications of plant medicines. The plants are her teachers and guides. Robin currently serves as the chair of the Botanical Medicine Department at Bastyr University where she has the opportunity to share



Tincture 1

<i>Actaea racemosa</i> (black cohosh)	20 mls
<i>Caulophyllum thalictroides</i> (blue cohosh)	20 mls
<i>Chamaelirium luteum</i> (false unicorn root)*	10 mls
<i>Viburnum opulus</i> (cramp bark)	30 mls
<i>Viburnum prunifolium</i> (black haw)	10 mls
<i>Dioscorea villosa</i> (wild yam)	20 mls
<i>Zingiber officinale</i> (ginger)	10 mls
1/2 tsp. three times/day from ovulation until menstrual flow begins.	

the wisdom of the plants with naturopathic students, the herbal community, and the medical community.

Chamaelirium luteum (false unicorn), also referred to as Helionias, is a plant identified by United Plant Savers as "at risk". It is both endangered in its natural habitat, and extremely difficult to propagate.

Tincture 2	
<i>Glycyrrhiza glabra</i> (licorice)	30 mls
<i>Eleutherococcus senticosus</i> (Eleuthero)	60 mls
<i>Oplopanax horridus</i> (devil's club)	30 mls
1/2 tsp. two times/day, once in the morning and once at noon.	

After two months, the painful menses had diminished by approximately 50%. Ms. C. was beginning to have increased energy during the day. She stopped the amitriptyline, her sleep less disturbed unless she consumed alcohol. Ms. C. still felt overwhelmed during the second half of her cycle with bouts of rage. She still complained of musculoskeletal pain, reporting that it would diminish after a polarity treatment for a few days, then slowly return.

Follow-up Treatment

1. Add *Bupleurum falcatum* to tincture 2, so it look

<i>Glycyrrhiza glabra</i> (licorice)	25 mls
<i>Eleutherococcus senticosus</i> (Eleuthero)	45 mls
<i>Oplopanax horridus</i> (devil's club)	20 mls
<i>Bupleurum falcatum</i> (bupleurum)	30 mls
112 tsp. two times/day, once in the am. and once at noon.	

like:

2. Continue castor oil treatments and include the area over the liver
3. Crotalus-h 200 c homeopathic remedy, one dose
4. Continue with Tincture 1.
5. Continue with Vitex.

Initially after adding the bupleurum, Ms. C. got very angry. Within two weeks, this anger settled. Over the next 3-4 months, the menstrual pain continued to progressively diminish. The vaginal and vulvar pain was gone, with some abdominal cramping remaining on the first day of her period. The periods flowed for 5 days ongoingly, without pausing in between and without clots. Her energy is slowly improving, better when she has an undisturbed night of sleep. The musculoskeletal pain continues to come and go, worse when she is fatigued. Ms. C. still becomes overwhelmed at times, but much less frequently and without so much rage.

The liver is integrally involved with all functions of the body, especially the conjugation and clearance

of estrogens. Hormonal balance is essential for many facets of our well being, including sleep and the function of the musculoskeletal system. As shown in this case, alcohol can sometimes exacerbate symptoms by compromising the function of the liver. Support for the H-P-A axis (hypothalamic, pituitary, adrenal axis) will certainly contribute to a balancing of the hormonal levels, as tincture 2 was targeted to do in this case. Tincture 1 was focused on supporting the hormonal state during the second phase of the cycle, as well as the antispasmodic action needed to reduce the dysmenorrhea. My choice in prescribing Crotalus-h reflects the patient's complaints in the Review of Symptoms. As life continues to challenge Ms. C's day to day activities, the action of this remedy, along with the herbal support, continue to assist her in maintaining her well-being.

* **Editor's note:** *Chamaelirium luteum* (false unicorn), also referred to as Helionias, is a plant identified by United Plant Savers as "at risk." It is both endangered in its natural habitat, and extremely difficult to propagate. Though it is a valuable medicine, and indeed, many feel it unsurpassed in the treatment of a range of gynecologic conditions, the JAHG supports the recommendation of UPS to use only cultivated false unicorn or avoid its use until it becomes more widely available from cultivated sources. Wildcrafted false unicorn should not ever be used.



Viburnum opulus

Postdates Pregnant Woman with Ruptured Membranes

by Mary Bove, N.D., Midwife

Joy, a 34 year old woman in her 41st week of pregnancy, is presenting with spontaneous rupture of membranes (SROM) for 12 hours with the absence of regular labor contractions. Her pregnancy has been normal with mild anemia in her third trimester, treated and resolved, negative vaginal beta strep (GBS) culture at 39 weeks with a repeat culture today, weight gain of 37 pounds, good activity level, normal bowel and urine habits, no protein in the urine, and no edema of the lower extremities. She has had active Braxton Hicks contractions the last several weeks, which have continued since rupture. Fluid discharge is clear and scant with mucus discharge at times. Joy's last prenatal exam was two days prior at which time her vaginal exam showed a soft, anterior positioned cervix 80% effaced, and 1 cm dilated.

Reproductive History: Gravida 4, Para 2, 1 miscarriage at 11 weeks, 2 prior vaginal births with normal postpartum period. Normal menstrual cycle of 28 days with no complaints.

Drug History: negative

Family History: maternal cardiovascular disease, hypothyroidism, and depression. paternal allergies, hypertension and asthma.

Past Medical History: childhood ear infections, eczema as a teen, fractured left arm in skiing accident at 21 years old.

Supplement History: Prenatal vitamins, flax/borage oil, and Mother's Cordial (*see below*)

Today's Exam: BP 118/74, pulse 72. Temperature 98.2. Urine is negative for protein and sugar, no edema, fetal heart tones (FHT) are 148 per minute, consistent with FHT throughout this pregnancy. Blood type A+, CBC drawn today

Review of Systems

No major complaints, digestion is good, sleep is disrupted due to small children, and tires easily at the end of the day.

Treatment

10:30 am: Joy is given instructions to manage SROM, which are standard protocol:

- Nothing in the vagina
- Monitor temperature morning and evening.
- No swimming, bathing, or sexual intercourse.
- CBC drawn within first 24 hours.

In addition, she is given the following tincture:

Herbs for Promoting Labor

Black Cohosh (<i>Actaea racemosa</i>)	20 mls
Blue Cohosh (<i>Caulophyllum thalictroides</i>)	45 mls
Partridge Berry (<i>Mitchella repens</i>)	15 mls
Mistletoe (<i>Viscum album</i>)	10 mls

2.5 mls or 1/2 tsp every 2 hours until onset of regular contractions.

Joy is also given instruction for reflex points to massage on feet and lower legs, and is told to keep well hydrated with fluids and to be active with walking. She is to check in with me at 3 pm.

3 pm: Joy calls and reports that she continues to leak scant amounts of amniotic fluid, her temperature is 98.0 degrees F, the baby is moving normally and for the past hour she has been having light but regular contractions every 10 minutes that last 45 seconds. She is instructed to take her dose of herbs at 3:30 pm and check back at 5 pm.

4:12 pm: Joy calls to report that her contractions have picked up to 3 minutes apart and a good minute long with her needing to breathe with each one. She was instructed not to take any more of the herbs and that I would come along to her house

9:07 pm: Joy gave birth to a healthy baby boy at 9:07 pm at home with her husband and their two children.

Mother's Cordial

This is a blend of herbs based on a formula developed by William Cook, a physio-medical physician. The formula is a partus preparator meant to be taken during the last several weeks of pregnancy to prepare the uterine muscle for labor. typically give it for the last 1 to 4 weeks of pregnancy

Caulophyllum thalictroides
Viburnum prunifolium
Chamaelirium luteum
Mitchella repens
Verbena officinalis
Zingiber officinale



Mary Louise Bove

Mary Louise Bove, N.D., obtained her Doctorate of Naturopathic Medicine and Midwifery Certification from Bastyr College of Natural Health Sciences in Seattle, WA. She received the Diploma of Phytotherapy/Herbal Medicine at the School of Phytotherapy in Great Britain and is a member of the National Institute of Medical Herbalists. She practices Naturopathic Family Medicine, including natural childbirth, at the Brattleboro Naturopathic Clinic (VT). Dr. Bove is the author of the *Encyclopedia of Natural Healing for Children and Infants* and co-author of *Herbs for Women's Health*. She lectures internationally on the topics of botanical medicine, phytotherapy, pediatrics and naturopathic obstetrics.

Treatment of Incomplete Miscarriage with Botanical Therapies and Continuing Reproductive Care

by Aviva Romm, C.R.M., A.H.G.

Initial appointment:

A 30-year-old woman contacted me in dire emotional distress, having learned one-week prior that her 8-week pregnancy was no longer viable. The nurse-midwife and consulting physician recommended a dilatation and curettage (D&C), a procedure that this woman did not want to have. She requested assistance in completing the miscarriage naturally, as well as with help for endocrine problems including repeated miscarriage (3), severe PMS, breast swelling, nausea, and nocturia, which she has had since her last miscarriage.

Height - 5' 8"

Weight - 210 lbs.

Medical History- Hypothyroidism. No other major medical problems.

Drug/Supplement History — Currently taking 120 mg daily Armour thyroid as prescribed by her endocrinologist. She has used this treatment for 3 years. Initially she tried Synthroid but discontinued this because she found it to be ineffective in treating fatigue, and she experienced sore muscles and "acidic stomach" while taking it. She is also taking a multivitamin, folic acid, and B-complex.

Family History -- Maternal grandmother has diabetes, paternal grandfather died "at a young age" of heart disease.

Allergies NKA

GI — Reports regular digestive and bowel habits but says she has some nausea both pregnant and non-pregnant. No other complaints.

Reproductive — Gravida 4, Para 2 (twins, 3.5 years old), Abortion 3

This patient has experienced severe PMS with depression and breast swelling for 3 years, and has had 3 miscarriages.

Cardiovascular -- No problems. blood pressure has always remained within normal limits.

Nervous — Patient stressed and anxious. Sleep regularly disturbed by dysuria (even when non-pregnant).

Endocrine — Hypothyroidism. Family hx. of diabetes (maternal). Experienced excessive weight gain (>60 lbs) within 8 months after last full-term pregnancy, presumably associated with hypothyroidism, plus extreme fatigue and depression.

Psychosocial — Finances very stressful; also demanding schedule with twins, PMS -D debilitating.

Treatment

Initial goal is to stimulate miscarriage as fetal demise has been confirmed by ultrasound and a D&C is not desired by this client. Fetal demise appears to have occurred approximately 2 weeks ago. No signs of miscarriage have occurred and cervix is closed and firm.

Botanicals

1. To initiate the process of cervical ripening use Evening primrose oil (*Oenothera biennis*) applied to cervix and taken orally as follows: p.o.: two 500 mg caps, bid, total 2000 mg daily for two days; cervically: oil from 2500 mg capsules, bid

2. After 24 hours of EPO as above, initiate oral administration of the following tincture combination:

<i>Caulophyllum thalictroides</i>	20 ml (1:4)
<i>Actaea racemosa</i> (syn. <i>Cimicifuga racemosa</i>)	20 ml (1:4)
<i>Gossypium herbaceum</i> .	20 ml (1:4)
Total 60 ml	

Beginning in the morning, take 30gtt q hr for 4 hr, then 30 gtt p 1/2 hr for 4 hours, then discontinue. If no contractions result, repeat the next day as for day 1. If no contractions result, discontinue for 24 hours, then repeat on the fourth day.

The client was also instructed to keep on hand *Angelica arangelica*, *Hammelis virginiana*, and other hemostatic herbs in the event of heavy bleeding with miscarriage, and to keep me informed of her progress.

During the first 24 hours she achieved no results with the protocol, but in the second 24 hours she began to have mild uterine contractions. She continued the protocol throughout this time until the miscarriage was well established, at which point she discontinued the herbs. The client miscarried uneventfully and was very satisfied. The client was

encouraged to wait 4 months to give her body a chance to recover before trying to achieve another pregnancy. A follow up visit was recommended to address other complaints.

Appointment 2

Client has been experiencing severe PMS-D, continued breast swelling and nausea. Also wants to be prepared to get pregnant again and to avoid miscarriage.

Gave following recommendations:

1. EPO 500 mg, bid
2. Tincture of:

<i>Vitex agnus castus</i>	50 ml (1:4)
<i>Verbena officinalis</i>	20 ml (1:4)
<i>Taraxacum officinale</i>	50 ml (1:4)
Total 120 ml	

Dose: 5 ml bid.

Note: Client chose to take 2.5 ml bid some of the time to minimize use of herbs to keep expense low

Client phoned after 3 days on herbs stating her depression was worse than ever. She was encouraged to push through for 24 hours to see whether this would lift and if it was just a temporary effect of the herbs on her hormonal status. The client agreed and was told to keep me apprised of her status. (Note: *Vitex* can temporarily aggravate depression in some clients with PMS-D. If the increased depression persists longer than 24 hours, the *vitex* should be discontinued and different botanical therapy provided). After 24 hours the client reported feeling remarkably better, and she remained on this formula for several months, no longer troubled by PMS symptoms, breast tenderness, or nocturia.

She became pregnant 4 months later at which time we consulted by phone to discuss a miscarriage prevention formula. The formula was modified by deleting *Verbena officinalis* and *Taraxacum officinale* and adding *Viburnum opulus* and *Dioscorea villosa* as follows:

<i>Vitex agnus castus</i>	60 ml (1:4)
<i>Viburnum opulus</i>	30 ml (1:4)
<i>Dioscorea villosa</i>	30 ml (1:4)
Total 120 ml	

The client proceeded to carry this pregnancy to term, discontinuing the herbal formulae after the first trimester. During the late pregnancy she stated

in a letter 'I have had a great pregnancy so far.' Her thyroid hormone level was low and her glucose was elevated during the pregnancy. The former modified with adjustments to her thyroid medication and the latter addressed only by diet.

Appointment 4

In a subsequent phone appointment, she said her primary concern was a return of thyroid and endocrine problems postnatally, which required focused attention. The client was encouraged to prepare her placenta to use as a restorative tonic in the immediate postnatal period, but due to personal beliefs, she declined. It was recommended that she use *vitex* in the immediate postpartum to guard progesterone levels about which she is very concerned.

Appointment 5

The client contacted me in the immediate postpartum for a formula to safeguard against future endocrine problems. The classic Chinese formula Eight Treasure Pill to Benefit Mothers in prepared form (dehydrated granules) was recommended.

Ingredients: *Panax ginseng*, *Atractylodes*, *Poria cocos*, *Ligusticum*, *Angelica sinensis*, *Rehmannia glutinosa*, *Glycyrrhiza uralensis*, *Peoni spp.*, and *Leonurus* in a dose of 2-3 grams bid.

After several days the client phoned because the baby developed a rash that disappeared and reappeared when the client discontinued then resumed the formula, so she discontinued. I have seen formulae containing *Angelica sinensis* lead to rash in the newborn in several cases. This was the last appointment with this client.

Stalled Labor

by Aviva Romm CPM AHG

A 28 year old, 40 week gestation, gravida 1, para 0 female client called me to her home at 9:30 am. She had begun labor with spontaneous rupture of membranes (SROM) at 8 pm the evening before. Fluids were clear. I provided protocol for SROM (see Bove case history), but did not perform any vaginal cultures. She was group-B strep (GBS) negative with no other outstanding medical history.

Her pregnancy had been entirely normal and healthy, with an average blood pressure of 112/65, regular pulse of 80, and fetal heart tones (FHTs) in



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a normal range of 140-152 bpm. The baby's position was left-occiput anterior at the last prenatal visit one week earlier, an excellent presentation generally associated with a normal birth. Client's height is 54" and her weight was 165 pounds, representing a normal weight gain of 22 pounds.

In planning a homebirth, this client had arranged hospital back up in the event of a complication or other need to transport to the hospital. She wanted a conservative approach to homebirth care, with transport to the hospital in the event of any deviation from normal.

I arrived at her house at 10 am to find her having mild contractions every 2-3 minutes lasting not more than 30 seconds. At 10:45 am the client wanted to take a bath. Because of the SROM and mild nature of the contractions, a cervical exam was performed before the bath with the suggestion that the bath be avoided if she was not at least 4 cm dilated. due to increased risk of infection should prolonged rupture of membranes ensue.

Upon examination she was completely dilated and the baby at a +1 station. The client proceeded to take a bath and have contractions for about another hour. but by 1 pm the contractions had diminished to every 5 minutes with only mild intensity, in spite of active walking and squatting. FHTs remained in normal ranges during this time, with auscultation performed every 30 minutes for 1 minute intervals with 5 second counts to detect variability. This status persisted until 3 pm. at which point her

membranes had been ruptured for 19 hours and she had been completely dilated for at least 4 hours with no urge to push.

Typical medical protocol is to initiate antibiotic therapy and labor augmentation with pitocin after 18-24 hours ROM. and given this client's desire to be conservative we discussed her options, including waiting to see what happens, herbal augmentation, and hospital transport. She opted for herbal augmentation, but had no appetite and an active gag reflex with occasional mild vomiting (she was, however, well hydrated and maintained her blood sugar with occasional light snacks of yogurt, and bites of peanut butter and jelly sandwich). Her stomach reflexes limited oral administration of herbs, so I suggested an herbal enema with 1 cup water and 2 dropperfuls of *Caulophyllum thalictroides* and 1 dropperful of *Gossypium herbaceum* added to the enema. She easily accepted this treatment (self-administered).

After 30 minutes contractions commenced, which we sustained with nipple stimulation (releases endogenous oxytocin and sustains uterine contractions). FHTs remained normal upon auscultation every fifteen minutes. and then every five minutes during the second stage of labor (pushing phase). In another 40 minutes she gave birth to an 5 pound 7 ounce baby boy, and delivered the placenta easily 25 minutes later and experienced minimal blood loss. She experienced a speedy postnatal recovery, taking 1 week of lying-in with the child.

