Homoeopathic management of polycystic ovarian disease & cholelithiasis with Chionanthus virginicus: A case report

Dr. SGS Chakravarthy

DOI: https://doi.org/10.33545/26164485.2021.v5.i2a.360

Abstract
Cholelithiasis is the commonest diseases of the Gall bladder which remains asymptomatic and often an incidental finding and presents as Right upper Quadrant pain, yellow coloured urine, jaundice or Clay coloured stools. The incidence of Cholelithiasis is more among women when compared to men due to the influence of Estrogen and Progestrone fluctuations. The Estrogen increase is also associated with Polycystic Ovarian disease leading to Irregular cycles. Homopathic ultra-dilutions act at the level of the Hypothalamic Pituitary Ovarian axis successfully cures many PCOS syndrome sufferers, and regularize the Irregular Cycles. Homoeopathic Remedies though less effective in curing Gallstones due to their composition, Hardness. Many Homeopathic remedies like Chelidonium, Chionanthus, Lycopodium, China. Etc. Act effectively in reducing the Cholelithiasis and Cholecystitis. One of such remedies is Chionanthus virginicus which contains alkaloids and seicoiridoids with its antioxidant properties is effective in treating Polycystic Ovarian Disease with Hepatic and Gall bladder disturbances.

Materials and Methods: Literature from various scientific articles were collected between the Hormonal connection between gallstone formation and Menstrual disturbances. Action of Alkaloids of Homoeopathic Chionanthus virginicus on Cholelithiasis and PCOS was shown here and along with a case report of Irregular menses with Cholelithiasis cured by Chionanthus virginicus.

Results: Female pt. Of age 28yrs with complaints of Menstrual Irregularities with Cholelithiasis. Literature from various scientific articles were collected between the Hormonal connection between gallstone formation and Menstrual disturbances. Action of Alkaloids of Homoeopathic Chionanthus virginicus on Cholelithiasis and PCOS was shown here and along with a case report of Irregular menses with Cholelithiasis cured by Chionanthus virginicus.

Conclusion: There is no direct relation between Menstruation and Cholelithiasis but predisposition to formation of Gallstones are higher during Fertile period and highly influenced by Progestrone and Estrogen due to the Receptor activity. Homoeopathic Drug Chionanthus virginicus has got curative effect on PCOS and restoring Menstruation regularly, with considerable effect in dissolving gallstones.

Keywords: Homoeopathic management, cystic ovarian disease, Chionanthus virginicus

Introduction
Gall stone formation is the most common disease of the biliary tree. Traditionally the Gallstones are classified into 3 types based on cholesterol content, including cholesterol stone (Cholesterol content ≥70%), Pigment stone (cholesterol content ≤30%) and Mixed stone (30% ≤cholesterol content ≤70%) (1). Women are twice as likely as men to form Gall stone formation due to the underlying Lithogenic effect of Progesterone and estrogen through G-protein-coupled receptor 30 (GPR30), an estrogen receptor [2]. The Hormonal-motility relationship contributes to the incidence of gallstones in Premenopausal women [1]. Normally the bile helps the liver to excrete Hormones like excess oestrogen and its harmful metabolites, which is the reason behind rise in oestrogens after Cholecystectomy [2]. An observation study on the changes in the Gall Bladder after administration of Estrogen and Progesterone, shown the rapid increase of lithogenicity due to rise in the absolute concentration of cholesterol during the menstrual cycle and Pregnancy [3].

The risk of Gallstones increase was higher in the 9 days after Mid cycle than at the end of Menstruation [4]. There is marked increase in Lithogenicity of Bile during the Oestrogen administration, but not so pronounced during Progesterone administration reflecting changes during menstrual cycle and pregnancy [3]. Usually these Hormones modify the contraction behavior of Gall bladder resulting in defective filling, slower gallbladder emptying, higher Residual volumes after contraction and retarded refilling of the empty gallbladder which play a major role in the pathogenesis of gallstone formation [5].

~ 25 ~
A study on the cholesterol saturation index of fasting Hepatic and Gallbladder bile shown a rapid increase during the second and third trimesters of Pregnancy [9-10]. Though Surgical intervention is the ultimate choice for cholelithiasis in conventional treatment, Homoeopathic system of Medicine plays an important role in complete cure in few cases and Symptomatic relief in most of the cases. Among them most of the Homoeopathic treatment Remedies like Chelidonium, China officinalis, Chionanthus virginicus, Lycopodium, Cholesterinum 6x etc are the specific remedies which are indicated in Mother tincture form or Potencies frequently with good outcome.

One such efficacious Remedy in Gallstones is **Chionanthus virginicus**.

**Chionanthus** Virginica, the Fringe Tree, is commonly found in the American South, principally Georgia and Tennessee. It is a white flowering tree, the name coming from the Greek words for snow (Chion) and flower (Anthis). The **Chionanthus** Mother tincture is prepared from the fresh bark and dilutions of mother tincture is given at a dosage of 2 to 10 drops in cases of Bilious headaches and Liver derangements [11].

The Root barks of **Chionanthus virginicus** are used in Homoeopathic medicines in the treatment of Icterus and Hepatitis. The Bark of the tree consists of chionanthin, saponin which is an effective stimulator of Hepatic processes". It was used by physicians of 19th century, to treat Jaundice, Diuretic, Cholagoge, Enlarged liver, and to clean wounds and sores. Over doses causes vomitings and low pulse [12].

From the Root Bark of **Chionanthus virginicus** Five Lignans were identified like phillyrin (1), pinoresinol-β-d-glucoside (2), pinoresinol di-β-d-glucoside (3), phillyrin-2-O-β-d-glucoside (6), phillyrin-6-O-β-d-glucoside (7), and three secoiridoids, oleuropein (4), ligustroside (5) and angustifolioside B (8), have been isolated from the root bark of **Chionanthus virginicus** L. a raw material used in the commercial preparation of Homoeopathy Tinctures. Compound 6 is a new lignan, and compounds 2, 3, 4, 5, 7 and 8 are described for the first time in the title plant [13].

The presence of secoiridoids and total lignans helps as Metal chelating action on ferrous ion, Hydrogen peroxide scavenging activity, ABTS (2,2’-azino-bis (3-ethylbenzthiazoline-6-sulfonic acid) radical scavenging, Anti-oxidant activity. The Biofunctionalities of these antioxidants helps in preventing DNA damage, Mutagenesis, Carcinogenesis, Bacteria growth, Free Radical scavenging [1].

It influences the liver, spleen, Blood making organs, and arouses cellular activity of biliary apparatus. It helps liver in detoxification by proper metabolism of urea and its products [15].

Secoiridoids have a variety of pharmacological effects like anti-diabetic, antioxidant, anti-inflammatory, Immunosuppressive, Neuroprotective, Anti-cancer, and Anti-obesity. The Secoiridoids and other components of tincture of **Chionanthus** bark liquefies the bile, prevents calculus formation. It is indicated in Jaundice of the Infancy and Term pregnant women also in uterine and ovarian congestions associated with Hepatic symptoms. **But is not indicated in jaundice from permanent occlusion of the duct / Impacted gall stones/ Foreign and malignant growths** [16].

An admirable tonic for congestion of the uterus, female affections [17]. "Jaundice with arrest of menses" should be a strong indication [18, 19]. In hepatic colic – gall stones – it is the most certain remedy of the Materia Medica. It is evidenced by Cases of Chronic Cholelithiatis that were successfully cured with Various Homoeopathic medicines in 50th Millesimal potency [20].

**Case report:** A 28yrs old Female pt. By name (blinded for privacy) resident of kottayam, came to the OPD with C/O pain in the Hypogastrium since 6 Months, and Irregular menses since 6 months.The pain in Hypogastrium started initially as pain during menstruation. The pain was stitching type of pain in the Hypochondrium more during the Menstrual flow when profuse. The pain was ameliorated by hot application and applying pressure on abdomen. Pain increases gradually and decreases gradually with stitching pain in the Rt. Hypochondrium. Starts suddenly and disappears suddenly. There was also Irregular menses since 3months. Intermenstrual bleeding with periods twice in a month. The flow was for 3days and profuse flow for 10-12 pads/day. No Leucorrhea or other abnormalities. No major past illness.

**Family history:** Nothing related major illness

**Physical Generals:** Appetite was good but due to Belching there was easy satiety. Thirst; Regular: 2-3ltrs/day, Desires: Pungent and sweet. Aversion- Nothing specific. Stool: Regular Urine: D/N.

**Mental generals:** Fear of Died ones and she had fear that died persons will come back and talk to her and they look at her. Fear of being alone.

The available Investigations of USG Abdomen on 30/09/2019 shown Multiple Calculi 2-3mm altogether measuring 2*1.7cm. Both ovaries appear to be normal in size but multiple tiny follicles < 10mm are noted in both ovaries -possibly Polycystic.

**First Prescription:** 14/08/2020, **Chionanthus** 30 Weekly Twice for 4 Weeks; Saclac For 1month.

**2nd Follow Up:** 11/12/20 - Periods Regular Since September after **Chionanthus**. For next three months Periods are regular and on time but In December Period occurred 15days before, with itching over the arms. RX- Lycopodium-200 4 doses weekly once, and SA CLAC for 1 month.

**3rd Followup:** USG Abdomen: Grade - I fatty liver without any Lesion. Cholelithiatis without Cholecystitis. Gall bladder: 2cm sized calculus.

**Thickness normal;** No evidence of Pericollection of Fluid around Gall bladder. Kidneys, Ureters and Bladder are Normal. Uterus -Normal Ovaries - Normal. LMP: Dec 1st - flow for 3 days- Not appeared in January but pain in Lower abdomen since 5 days; RX- **Chionanthus virginicus**-30, 8 doses weekly twice and Saclac for 1 Month. Later again from the next visit onwards she was on Saclac and her periods were regular and No pain in Hypochondrium recurred.

**Results**

The Drug **Chionanthus** 30 was prescribed for two Prescriptions in a gap of 5 months, with Lycopodium 200
once in between. Since her main complaint was Irregular menses for the last many months, after Chionanthus her PCOS was disappeared and Menses was regular and Gall bladder calculi size also reduced much.

**Discussion**

Cholelithiasis is the commonest among diseases of Gall bladder, usually they are asymptomatic and often an incidental finding but only 10% people show symptoms. There are lot of reasons for Cholelithiasis formation like sluggish emptying from the gall bladder, partial emptying of Gall Bladder, neoplasms, strictures etc. And the Risk factors include Obesity, Genetic factors, Medications like Oestrogens, Fibrates, Somatostatins, etc., metabolic syndrome. The Female genders are more Prone to Gall stone formation due to the high concentrations of Estrogen and Progesterone. The Gall Bladder by the presence of Estrogen and Progesterone Receptors, gets highly influenced by these Hormonal fluctuations during Menstruation and Pregnancy, thus getting effected in the motility, Contraction, filling or Emptying of Gall Bladder resulting in stasis of Bile and further to Cholelithiasis. The Homoeopathic Remedy Chionanthus virginicus is one of the Best Remedies for Calculus in Gall Bladder and Hepatic Congestions. One of the important peculiar feature for Chionanthus which was written as “Jaundice with arrest of Menses” finds to be very useful for Regularisation of the cycles as well as dissolution effect on Gall bladder or Hepatic Congestions. Basing on the above peculiar symptom of “Jaundice with arrest of Menses” the female patient was prescribed Chionanthus, without following the routine Classical Repertorization. Surprisingly the case started Improving from the first Prescription onwards with Regularization of cycles and Gall stones also started reduction in size. Later she had some acute allergic rash due to some unknown reason and Gastritis wherein she was prescribed Lycopodium 200, and later got relieved of that too, but Menses again skipped for that month. On the Third instance she was again prescribed Chionanthus again after which her periods were regularized and when inquired patient said she is comfortable.
Conclusion
Cholelithiasis is one of the common diseases of gall bladder among women due to the Hormones Estrogen and Progestrone. There is no direct relation between Menstruation and Cholelithiasis but predisposition to formation of gallstones are higher during fertile period and highly influenced by estrogen. The above case depicts that Chionanthus acts on these Hormonal effects on Gall Bladder Motility and Emptying, which results in Calculi formation. It also gives us an idea of the Chionanthus Secoiridoids and Lignans beneficial effects on the Hormonal effects of Menstruation and Gall Bladder disorders which needed to be more explored in further Studies.

Acknowledgments
I thank Dr. K.C. Muraleedharan, Officer in-charge, Dr. R. Sitharthan, Principal, and all other faculties of NHRIMH, for their cooperation.

References
1. Tie Qiao et al., “The Systematic classification of Gall bladder stones”; Plos One; Published online 2013, 4.
2. Helen Wang H et al., “Activation of Estrogen Receptor G Protein coupled Recpetor30 enhances cholesterol cholelithogenesis in female mice”. Hepatology, 29th 2020.
3. Fried GM et al. “Comparison of Cholecystokinin release and Gallbladder emptying in men and in women at Estrogen and Progesterone phases of the Menstrual cycle”; National Library of Medicine, Mar 1984.
4. Green PS. “A Revision of Chionanthus (Oleaceae) in S. America and the Description of Priogymnanthus, gen. Nov”. Kew Bulletin 1994;49(2):261-286. (26 pages); Published By: Springer.
5. Nakagaki M, Nakayama F; “Effect of female sex hormones on lithogenicity of bile”,The Japanese Journal of Surgery, 1982.
6. Wicks AC et al., “Fluctuations of serum and bile lipid concentrations during the menstrual cycle”. The British Medical Journal; Published, 1977.
7. Mitsuru Nakagaki & Fumio Nakayama; “Effect of female sex hormones on Lithogenicity of bile” The Japanese Journal of surgery 1982;12:13-18.
8. Braun B, Dormeyer HH. Changes in gallbladder motor function during the female cycle — a risk factor leading to gallstone formation?. Klin Wochenschr 1982;60:1357-1362.
9. Kern F Jr et.al; “Biliary lipids, bile acids, and gallbladder function in the human female. Effects of pregnancy and the Ovulatory cycle”. The Journal of Clinical Investigation; 1981;68(5):1229-1242.
10. Shaffer EA. “The effect of a progestin on gallbladder
function in young women”; American Journal of Gastroenterology 1984;148(5):504-7.

11. Blackwood AL. “Materia Medica Therapeutics and Pharmacology”, Boericke and Taefl, Philadelphia Lucy Merywether Lewis “Marks on Medicinal uses of Chionanthus virginicus”, 1906. https://www.monticello.org/sites/library/exhibits/lucymarks/gallery/varfringetree. html.

12. Laurent Boyer et.al; “Lignans and secoiridoids from the root bark of Chionanthus virginicus L. isolation, identification and HPLC analysis. "Phytochemical Analysis 2005;16(5):375-9.

13. Chionanthus virginicus L. Phytochemical Analysis and Quality Control of Herbal Drug and Herbal Preparations, Natural Product Communications 2011;6(6):753-8.

14. Dr. Schar- A PhD. Thesis on Chionanthus virginicus. Tanuja BM. Text Book of Medicine. http://307.e54.mwp.accessdomain.com/white-fringetree-Chionanthus-virginicus/

15. Harveys wicke Felter et al.; “Kings American Dispensatory”. Henrittes Herbal Home page 1898.

16. Goss IJM M.D; “A treatise on Chionanthus virginica; The Therapeutic Uses” by Florence Tippett Duvall, M.D., Atlanta, Ga. James Tyler Kent- “Lectures on Homoeopathic Materia Medica” Third Edition; Philadelphia: Boericke & Tafel, 1923; Copyrighted by Boericke & Tafel, Preface To Third Edition 1923.

17. John Henry Clarke; Chionanthus virginicus “A dictionary of Practical Materia Medica”. B.Jain Publishers; Reprint Edition, 2006.

18. Amulya sahoo.et.al; Chronic Cholelithiasis treated with Homoeopathic Medicine in 50th Millesimal Potency- A case Report; IJRH; year 2020;14(1):57-63.