

Vaginal Bee Propolis Treatment of Uterine fibromyoma A New Modality

Ali Farid M. Ali¹, Laila Farid² and Samir Shaker³

¹Consultant Obstetrics and Gynecology Heliopolis Hospital, Cairo, Egypt.

²Consultant Obstetrics and Gynecology, Cairo Medical Centre, Cairo, Egypt.

³Consultant Clinical Pathology, Heliopolis, Cairo, Egypt.

elshayb1950@yahoo.com

Abstract: Introduction: Uterine fibromyoma as are the most common benign tumors of the uterus, hysterectomy is the definitive treatment of symptomatic fibromyomas (uterine). Medical treatment of uterine fibromyomas include androgens, antiprogestogens, reloxifene and the most common used treatment GnRHagonist, we introduced for the first time in the literature Bee propolis in the treatment of uterine fibromyoma. **Objective:** To test the efficacy and safety of Vaginal Bee Propolis in the treatment of uterine fibromyoma. **Patients & Methods:** A total of 40 with a single fibromyoma measuring ≥ 8 cm were enrolled in the study. Bee propolis was taken in the tablet form 1g daily for 8 weeks, measuring Hb concentration before and after the treatment. **Main outcome measuring:** Measurement of fibromyoma volume, uterine volume, Hb concentration. **Result:** Statistically significant decrease in the myoma and uterine volume after treatment. ($P < 0.01$) statistically significant increase in Hb concentration. ($P < 0.01$). **Conclusion:** Vaginal Bee propolis is a new line of treatment of uterine fibromyoma with no side effect.

[Ali Farid M. Ali, Laila Farid and Samir Shaker. **Vaginal Bee Propolis Treatment of Uterine fibromyoma A New Modality.** *J Am Sci* 2019; 15(3):8-10]. ISSN 1545-1003 (print); ISSN 2375-7264 (online). <http://www.jofamericanscience.org>. 2. doi:[10.7537/marsjas150319.02](https://doi.org/10.7537/marsjas150319.02).

Keyword: Uterine fibromyoma, Bee propolis, Caffeic acid phenethyl ester (CAPE). Vagina.

1. Introduction:

Alternative medicine is a new in fibroid^(1,2,3) natural products put their place in this field from these natural products come Bee Propolis.

Bee Propolis is a peculiar natural product caffeic phenethyl ester (CAPE) is the main component, which have the following actions; antibacterial, antifungal, anti protozoan, anti-inflammatory, anti-metastatic, stimulation of immunity. Induction of apoptosis, proapoptosis and antagonize growth factors like epidermal growth factors vascular endothelial growth factors.

Uterine fibromyoma is the most common benign tumor in the female^(4,5). Two types of fibromyoma: non symptomatic and symptomatic (menstrual disorders, anemia, pelvic, discomfort, infertility and obstetrics complications⁽⁶⁾), from pathological point of view it is a benign tumors arises from^(7,8). Single uterine smooth with no definitive a etiology^(8,9,10,11,12), treatment of fibromyoma either medical or surgical which is the main line of treatment⁽¹³⁾. Gonadotrophin releasing hormone GnRHagonist is the most common medical treatment⁽¹⁴⁻²¹⁾, less common oral contraceptive, anti-estrogen, anti-progesterone (mifepristone)⁽²²⁾, and more recently selective modulator of progesterone receptor⁽²²⁾. Due to hypoestrogenic effect of GnRHagonists, rapid recurrence rate after the end of treatment⁽¹⁵⁾, decreased bone mineral^(16,17,18,19,21,23), and the need for add back therapy^(24,25) a search for a new medical treatment is needed, So the aim of this work is to

introduce vaginal bee propolis as a new modality of treatment of uterine fibromyoma.

2. Material and Methods

40 women had uterine myoma were enrolled in the study, the inclusion criteria were age between 30-42 years mean age 30 ± 1.99 , years single fibromyoma measuring ≥ 8 cm. Vaginal Bee Propolis was used in the form of 1000mg Vaginal tablet, daily for 8 weeks. Assessment of uterine bleeding by using daily bleeding diaries and Hb concentration, uterine dimensions and myoma dimensions were measured by 3D ultrasound.

The exclusion criteria were metabolic, infectious diseases, and previous hormonal therapy over the previous 9 months, history of previous myomectomy, combined adenomyosis and fibroid, aspirin intake, anticoagulant therapy and antihypertensives).

Ethics:

Informed Consent and explaining all the details of the procedure to the patients, and all procedures involving human subjects complied with the declaration of Helsinki 1975 and revised in 2000, again all the procedures accepted from the ethical committee of Heliopolis Hospital.

Statistical analysis:

Base line data analysis for patients was performed with the grouped student's t – test. to assess volume changes and (hemoglobin) Hb concentration before and after treatment by two- tailed grouped student's, testing Significance was defined as $P < 0.05$.

3. Results:

Forty women were enrolled in the study: the effect of vaginal bee propolis 1000mg daily for 8 weeks in the treatment of fibromyoma (uterine volume, and myoma volume and Hb concentration).

In the table (1) we found statistically significantly decrease in the uterine volume, and myoma volume after 8 weeks treatment by vaginal bee propolis $p < 0.01$. Also statistically significantly increase Hb concentration.

Table (1): Effect of Vaginal Bee Propolis treatment in 40 myomatous patients.

Characteristics	Before	After	P-Value
Uterine volume	411±6.2	185±9.1	<0.001
Myoma volume	120.11.9±12.6	90.7±5.1	<0.001
Hb concentration	7.1±0.5	13.9±0.9	<0.001

4. Discussion:

Bee propolis is a natural product, there are many route of intake: orally, locally and vaginally. This is the first report to use bee propolis^(24,28) vaginally in the treatment of uterine myoma i.e. reduction of myoma volume, uterine volume. The basis of this work depend upon the results of our previous work, in which we studied the effect of bee propolis on fibromyoma in vitro^(24,25,26), together with its characteristics biochemical effect. These effects are: it suppresses proliferation, induced apoptosis, proapoptosis inhibit the expression of major growth factors including epidermal growth factor, insulin like growth factor, Trans forming growth factor Beta and their receptors in cultured myoma muscles^(1,2,24,25,26,27), reduction of blood flow to the uterus by inhibiting vascular endothelil growth factor⁽²⁴⁾, anti-inflammatory^(1,24,27) and affection of transcription factors NF-KB^(1,24,27) on ultra-structural level: it affect mitochondria enzymes and lysosomal bodies in the cytoplasm and inhibition of cytochrome^(8,9,28,29) P450 produced locally in myoma but not in the ovary, so no effect on estrogen production from the ovary and finally suppressed many oncogene e.g. (MDME) involved in the mechanism of the tumor formation^(11,26)

So the mechanism of action of Vaginal Bee propolis in reducing the Myoma volume is by two mechanisms first one reducing estrogen in the myoma only, second, is by the chemical and biochemical properties of Bee propolis. We don't encounter any case of recurrence after eight weeks of treatment in contrast to GnRH Agonist treatment of Myoma⁽¹⁵⁾. and No reported side effect but in addition there is a positive impact on the general health of the patients. Vaginal Bee propolis is the most accepted route for taking the drug by women, in addition to its effect on myoma it has many positive impact on the Vaginal health (treatment of infection and resistant infection.

Regarding the cost of treatment it is cheap in comparison to other drug, and with no adverse effect.

5. Conclusion:

Vaginal Bee Propolis is a new route for intake of bee propolis in the treatment of fibromyoma with no adverse effects.

References:

1. Santos F. A, E.M.A.F Bastos, A.B.R.A Maia, M. Uzeda, M.A.R Carvahlo L.M Farias, E.S.A Moriera. Brazilian Propolis: physicochemical properties, plant origin Antibacterial Activity on Period ontopathoens. *Phytotherapy Res.* 2003; 17: 285-289.
2. Kashiwada Y, Nishizawa M. Yamigishi T, Tanaka T, Nonaka G, Coseentino LM et al., Anti AIDS agents: 18 sodium and potassium salts of caffiec acid tetramers from *Arnebiaeuchroma* as anti HIV agents *Nat Prod*1995; 25:392-400.
3. Genya Gekker, Shuxian Hu, Marla Spivak, James R. Lokensgard, Phillip K. Peterson. Anti-HIV-1 activity of propolis in CD4+Iymphocyte and micogial cell cultures. *Journal of Ethnopharmacology.* 2005; 102: 158-163.
4. Cheng. MH. Wang PH. Uterine myoma: a condition amenable to medical therapy? *Expert Opin Emerg Drugs* 2008; 13: 119-33.
5. Haney AF. Clincal decision making regarding leiomyomata: what we need in the next millennium. *Environ Health Perspect* 2000; 108(Suppl 5): 835-9.
6. Brandon DD, Erickson TE, Keenan EJ. Strawn EY, Novy MJ, Burry KA, et al., Estrogen receptor gene expression in human uterine leiomyomata. *J Clin Endocrinol Metab* 1995; 80: 1876-81).
7. Myers ER. Goodwin S. Landow W. Mauro M. Peterson E., Pron G, et al. prospective data collection of a new procedure by a specially society: the FIBROID registry. *Obstet Gynecol* 2005; 106:44-51.
8. Bulun SE, Simpson ER, Word RA. Expression of the CYP19 gene and its product aromatase cytochrome P450 in human uterine leiomyoma tissues and cells in culture. *J Clin Endocrinol Metab* 1994; 78: 736-43.

9. Sunitani H, Shozu M, Segawa T, Murakami K, Yang HJ, Shimada K, et al. In situ estrogen synthesized by aromatase P450 in uterine leiomyoma cells promotes cell growth probably via an autocrine/intracrine mechanism. *Endocrinology* 2000; 141:3852-61.
10. Pollow K, Sinnecker G, Boquoi E, Pollow B. In vitro conversion of estradiol-17 β into estrone in normal human myometrium and leiomyoma. *J Clin Chem Clin Biochem* 1978; 16:493-502.
11. Eiletz J, Genz T, Pollow K, Schmidt-Gollwitzer M. Sex steroid levels in serum, myometrium, and fibromyomata in correlation with cytoplasmic receptors and 17 β -HSD activity in different age-groups and phases of the menstrual cycle. *Arch Gynecol* 1980; 229:13-28.
12. Newton GJ, James VH. 17 β -hydroxysteroid dehydrogenase activity in leiomyoma and myometrium and its relationship to concentrations of oestrone, oestradiol and progesterone throughout the menstrual cycle. *J Steroid Biochem* 1985; 22:487-93.
13. Stewart EA. Uterine fibroids. *Lancet* 2001; 357:293-8.
14. Friedman AJ, Rein MS, Harrison-Atlas D, Garfield JM, Doubilet PM. A randomized, placebo controlled double-blind study evaluating leuprolide acetate depot treatment before myomectomy. *Fertile Steril* 1989; 52:728-33.
15. Fedele L, Vercellini P, Biachi S, Brioschi D, Dorta M. Treatment with GnRH agonists before myomectomy and the risk of short term myoma recurrence. *Br J Obstet Gynaecol* 1990; 97:393-6.
16. Shaw RW. Mechanism of LHRH analogue action in uterine fibroids. *Horm Res* 1989; 32 (Suppl 1): 15-3.
17. Gulan A, Bukovsky I, Pansky M, Schneider D, Weinraub Z, Caspi E. Preoperative gonadotrophin-releasing hormone agonist treatment in surgery for uterine leiomyomata. *Hum Reprod* 1993; 8: 450-2.
18. Stovall TG, Muneyyirci-Delale O, Summitt RL Jr, Scialli AR. GnRH agonist and iron versus placebo and iron in the anemic patient before surgery for leiomyomas: a randomized controlled trial. Leuprolide Acetate Study Group. *Obstet Gynecol* 1995; 86:71.
19. Hornstein MD, Surey ES, Weisberg GW, Casino LA. Leuprolide acetate depot and hormonal add-back Study Group. *Obstet Gynecol* 1998; 91:16-24.
20. Shozu M, Murakami K, Segawa T, Kasai T, Inoue M. Successful treatment of a symptomatic uterine leiomyoma in a perimenopausal woman with a nonsteroidal aromatase inhibitor. *Fertile Steril* 2003; 79:628-31.
21. Bozzini N, Rodrigues CJ, Petti DA, Bevilacqua RG, Goncalves SP, Pinotti JA. Effects of treatment with gonadotropin releasing hormone agonist on the uterine leiomyomata structure. *Acta Obstet Gynecol Scand* 2003; 82:330-4.
22. De Leo V, Morgante G, La Marca A, Musacchio MC, Sorace M, Cavicchioli C, et al. A benefit-risk assessment of medical treatment for uterine leiomyomas. *Drug Saf* 2002; 25:759-79.
23. Adamson GD. Treatment of uterine fibroids: current findings with gonadotropin releasing hormone agonist. *Am J Obstet Gynecol* 1992; 166: 746-51.
24. Ali Farid Mohamed Ali: Updated innovation in infertility international. *Journal current research* 2015, Vol. Issue 1 P 11355 – 1136 January.
25. Ali Farid Mohamed Ali, et al., ultrasound Guided injection of GnRHa in the treatment of uterine myoma, *Journal American Science*. 2013, 9 (12).
26. Ali Farid. M. Ali. Bee propolis as a miracle first prize paper presented to the 4th international congress of Mediterranean society of reproduction, Roma, Italy 10-13 October 2005.
27. Ali Farid Mohamed Ali, et al. Bee propolis as a new modality of treatment of H₁N₁ Influenza: *Journal of American Science*: 2013, 9 (12).
28. Sumitani H, Shozu M, Segawa T, Murakami K, Yang HJ, Shimada K, et al., in situ estrogen synthesized by aromatase P450 in uterine leiomyoma cells promotes cell growth probably via an autocrine/intracrine mechanism. *Endocrinology* 2000; 141:3852-61.
29. Shozu M, Sumitani H, Segawa T, Yang HJ, Murakami K, Kasai T, et al., over expression of aromatase p-450 in leiomyoma tissue is driven through the promoter 1.4 of aromatase P-450. *J Clin Endocrinol Metab* 2002; 87:2540-8.