



AkiNik

International Journal of Herbal Medicine

Available online at www.florajournal.com

I
J
H
M
International
Journal
of
Herbal
Medicine

ISSN 2321-2187
IJHM 2013; 1(4):88-91
© 2013 AkiNik Publications
Received: 18-11-2013
Accepted: 29-11-2013

Hina Rehman

Department of Ilmul Qabala
Amraze Niswan (Obstetrics and
Gynaecology), National Institute of
Unani Medicine, Bangalore,
Karnataka, India

Wajeeda Begum

Department of Ilmul Qabala
Amraze Niswan (Obstetrics and
Gynaecology), National Institute of
Unani Medicine, Bangalore,
Karnataka, India

Farzana Anjum

Department of Ilmul Qabala
Amraze Niswan (Obstetrics and
Gynaecology), National Institute of
Unani Medicine, Bangalore,
Karnataka, India

Humyra Tabasum

Department of Moalejat (Medicine),
National Institute of Unani
Medicine, Bangalore, Karnataka,
India.

Correspondence:**Hina Rehman**

Department of Ilmul Qabala
Amraze Niswan, National Institute
of Unani Medicine, Kottigepalya,
Magadi main road, Bangalore,
Karnataka, India.
Email: hinarehman06@gmail.com,
parinaz06@yahoo.com
Tel: +919590573317

Approach to dysmenorrhoea in ancient ages and its current relevance

Hina Rehman, Wajeeda Begum, Farzana Anjum, Humyra Tabasum

Abstract

Dysmenorrhoea, cyclic lower abdominal pain or pelvic pain which may radiate to back and thigh, is one of the most common gynaecologic condition experienced by menstruating women. The occurrence of painful menstruation is noticed by ancient times. Over the centuries, numerous authors have speculated on the particular cause of primary dysmenorrhoea; although false belief is still persists regarding pain and menstruation. The pain is often not completely relieved despite the use of medication in some women. It is necessary to understand the new available as well as traditionally documented therapeutic options for pain relief of dysmenorrhoea. The review will focus on ancient concepts of dysmenorrhoea in different era with available research studies on prescribed treatments in order to understand the alternative holistic approach.

Keywords: Dysmenorrhoea; Alternative approach; Unani Medicine.

1. Introduction

The normal ovulatory cycle is almost invariably accompanied by mild to moderate perimenstrual symptoms (including menstrual pain) which resolve spontaneously and are minimally disruptive. When pain is severe enough to cause functional incapacitation or treatment seeking the patient is diagnosed as suffering from dysmenorrhoea [1], a condition recognised by medical science since ancient times [2]. Dysmenorrhoea constitutes one of the most frequent disorders in women of fertile age [3]. It is derived from Greek words “dys” (difficult, painful or abnormal), “meno” (month) and diarrhea (flow) [4] that is “Painful menstrual flow.” It is estimated to affect almost half of all women [5] and is one of prime factor for work absenteeism and reduced quality of life. It is found that an estimated 600 million hours are lost annually from school or work because of dysmenorrhoea [6].

Dysmenorrhoea is potentially the most common but underdiagnosed gynaecologic condition because of common societal beliefs regarding a lack of effective treatments and expectations about the burden of menstruation [7, 8]. Throughout history, menstruation has been viewed as an inescapable burden that women must endure. Ancient cultures observed taboos of menstruation derived from man’s fear of the ‘mysterious flow’. A menstruating woman was isolated and confined, in often cruel ways, so that her ‘deadly contagion’ would not poison the earth, herself, and mankind [9]. The role of alternative approaches in painful conditions is known for millennia and if explored efficiently can surprise by its concepts and recommendations. In this review an effort has been made to highlight the forgotten piece of knowledge in the light of current aspect.

2. Concept of Primary dysmenorrhoea in ancient times

Albeit, word “dysmenorrhoea” makes its appearance in the English language about 1810 [10] but it is as old as medical history [7] and is traced by various civilisation.

Ancient Egyptian Practitioners (6000-1200BC) knew that amenorrhoea and dysmenorrhoea were abnormal conditions and they administered a variety of soothing aromatic oils and ointments for inflammation of internal and external genitalia [11]. The Kahun Papyrus (1850 BC) is probably the first text book of Gynaecology, deals lower abdominal pain with swelling and offers their treatment [12]. In Ebers Papyrus, a condition is mentioned that sounds like dysmenorrhoea [13].

Dysmenorrhoea is well known by Greek physicians (500-300 BC). The famous Greek philosopher Hippocrates (460-377 BC), founder of Unani Medicine who freed medicine from province of superstitious were of opinion that the stagnation of menstrual blood secondary to cervical stenosis leads to dysmenorrhoea.

He also states dysmenorrhoea does not occur when menstrual flow is regular and adequate in amount ^[14]. Hippocrates described that delaying of motherhood could trigger disorders of the uterus and painful menstruation is one such outcome. Women who suffered from dysmenorrhoea were therefore urged to marry and conceive as quickly as possible ^[15]. He recommended the application of heat to external genitalia or abdomen by burning a concoction of wine, fennel and rose oil. ^[14]Both Hippocrates and Aristotle (384-322 BC) advocated breathing exercises to relieve pain ^[12].

According to ancient Rome physicians (8th century BC) impending menstruation was diagnosed by various physical and psychological complaints and treatment were offered for dysmenorrhoea, menorrhagia, and other menstrual disorders. ^[12] The early Romans used herbs, specifically asparagus root (*Withenia somnifera*), to relieve menstrual pain. Soranus of Ephesus (AD 98-138) reports that "many women, menstruating with difficulty and pain because of a long widowhood, have menstruated freely after marrying again," with marriage implying that the conception curative would soon follow ^[2]. Soranus was aware that dysmenorrhoea could affect the older parous patient and described subinvolution as its cause ^[12]. He advised local application of a bladder filled with hot oil and held over the aching abdomen ^[12]. Other methods for applying heat on lower abdomen include hot compress, heating pads and hot water bottles ^[14]. Dioscorides (40-90AD) reported menstrual pain as an organic, pathologic condition which requires medication. He offered treatment for dysmenorrhoea; one is described as "the horn of a hart being burnt & wash, if it be drank the quantities of two spoonfuls. It is good also for women troubled with ye flux (of ye wombe) being given with some liquor fitting for that grief ^[15]".

The ancient Hindus in 1200-600 B.C advocated rubbing oil or ghee on the pubis for dysmenorrhoea and distending the vagina with a roller of cloth ^[2]. Moxibustion has been used by Chinese medicine for various purposes including menstrual pain. They shaped pulverized wormwood (moxa root) into a small cone and put it on a slice of ginger. This is set on a specific point of the abdomen, ignited and left to burn down to the skin ^[14, 15].

In medieval era, Zakarya Razi (Rhazes; 865 AD) an Arab physician mentioned by Dysmenorrhoea as pain of uterus (*darde rehmi*) in his manuscripts Al Hawi Fil Tib and recommended numerous formulation and regime to relieve menstrual pain. He has demonstrated various causes of dysmenorrhoea and ovulation is one among them. Castoreum (*junde baidastar*), *Crocus sativus* (*zafran*), *Prunus laurocerasus* (*habbulghar*), *Mentha spicata* (*pudinabbarri*), oil of *Iris ensata* (*sosan*), *Hyoscyamus niger* (*bazrulbanj*) and *Pistacia lentiscum* (*mastagi*) were suggested by Dioscorides and Galen to relieve menstrual pain. These drugs were quoted by Razi as responsive medicine for the treatment of dysmenorrhoea in Al Hawi Fil Tib. He also advised dry cupping (*hijamah*) and massage (*dalak*) on lower abdomen, and sitz bath to relieve pain and recommend eating cabbage and beetroot ^[16].

Ibn Sina (Avicenna; 980-1037 AD) wrote in his treatise Canon of Medicine that any obstruction in the flow of menstruation due to altered temperament (*sue mizaj*) results difficult menstruation ^[17]. Abu al Majoosi (died 982-994) and Ibn Hubal (1122-1213) have described painful menstruation along

with amenorrhoea in their legendary texts *Kamilassina* (the complete book of medical art) and *Kitab al Mukhtar al tibb* respectively and mentioned that women having scanty flow of menstruation usually suffer from pain ^[18, 19]. Antaki (1541-1599 AD) has depicted that lower abdominal pain before menstruation is the result of *aharaqemadda* and *sudda* (obstruction) formation ^[20].

3. Concept of Primary Dysmenorrhoea in nineteenth to twentieth Century

In nineteenth century attitude towards dysmenorrhoea has been changed and it was considered to be a very serious although common condition. In the early nineteenth century the dysmenorrhoea of old maids and widows was called colica scrotum, ovaralgia or hysteralgia and was thought to be caused by unsatisfied sexual appetite ^[12]. In Victorian era (19th century), young women with menstrual cramps were advised to refrain from reading novels or listening to music as these hobbies were thought to cause over excitement of their sensitive emotions and thereby worsen their illness ^[15] and they advocated to stay at home, rest, and avoid exertion and bathing ^[2, 9]. Victorian doctors held up cannabis as particularly useful. In fact, Queen Victoria herself took cannabis each month. Some doctor also recommended opium in conjunction with camphor to relieve menstrual pain ^[21]. In 1830 Charles MacIntosh of Edinburgh treated dysmenorrhoea by the use of graduate sounds to dilate the cervix ^[12].

Cote F. Lyons (1925) advocated presacral-neurectomy, who latter published optimistic result in 300 patients. Jean Clow (1927) detailed the condition in teenage girl and found that 20% of the girls had developed some form of menstrual disorder within 4 years of puberty. Jean Clow introduced a regimen of healthy living and plenty of open exercise, thus reducing the incidence of dysmenorrhoea from 46.7% to 10.8% ^[12].

3.1 Various hypotheses by authors

A Scottish physician, in the 1920's wrote that dysmenorrhoea was related to personality factors. He stated that it occurs in patients of naturally sensitive or highly strung organization, the artistic temperament, or in women in whom self-control has not been developed ^[2, 14].

The psychogenic theory was advanced in the 1940s, ^[2, 22] when an American text book on menstrual disorder states that dysmenorrhoea is usually due to "hypersensitiveness of the nerves supplying the uterus". According to this author, painful menstruation may also be caused by "sexual excitement without relief (long engagement, coitus interruptus, masturbation)" ^[2]. Various psychogenic factors have been quoted as possible origins of primary dysmenorrhea. These include lack of accurate information regarding menstrual function, the benefits of secondary gain associated with pain and the concept of rejecting the female role. A British gynecologist wrote at twentieth century that it was important for women who were menstruating to avoid exposure to chill and to keep their bowels acting a little more freely than usual. He also recommended hot drinks at bedtime. An American physician of the same era suggested the following remedies for dysmenorrhoea: "Hot stimulating drinks, especially gin; aromatics such as ginger, red lavender and peppermint; and counter irritation with tincture of iodine applied to the skin

over the pubic region." Other common treatments at this time included sitz baths and placing one's feet in mustard and hot water in order to draw the blood from the pelvic region [21].

3.2 Current evidence

There is now evidence that hormone like substances called prostaglandins are involved in the pathophysiology of disorder. In the 1930s, von Euler first characterized the presence in semen of active substances that induced uterine contractility. Increased uterine activity was first hypothesized as a cause of dysmenorrhoea in 1932. The active elements were named prostaglandins, based on the erroneous belief that they were produced by the prostate gland [10]. Knaus (1929) and Moir (1933-34) and other investigators studied intrauterine pressure throughout the menstrual cycle and concluded that dysmenorrhoeic patient experience pain when the pressure reached 80-100 mmHg and muscle ischemia was suggested as a causative factor [12]. The relationship of dysmenorrhea and ovulation was discovered in 1938 and was treated by ovulatory suppression with estrogen [22]. In the late 1940, Liesse demonstrated that women with dysmenorrhoea not only had a greater degree of uterine electrical and mechanical activity, but that this activity is correlated with the pain of menstruation [10]. But it was Pickles *et al.* (1965) who found higher levels of prostaglandins F2 α and prostaglandin E2 in women with primary dysmenorrhoea compared with those 'pain free' periods. They recognized involvement of prostaglandins synthetase inhibitors as a treatment modality. Later Schwartz *et al.* (1974) found that PG synthesis inhibitors produced symptomatic relief in primary dysmenorrhoea; which is still the primary therapy for dysmenorrhoea [12].

In 1979 Akerlund *et al.* implicated vasopressin as a cause of the condition [12]. Leukotriene (LT) receptors were shown to present in the uterine tissues in the 1980s. Nigam *et al.* in 1991 reported significantly higher concentration of LTC $_4$ and LTD $_4$ in women with primary dysmenorrhoea [23]. Again in 2004 Akerlund *et al.* states that in non-pregnant women the receptor density of vasopressin and oxytocin in uterus varies over the menstrual cycle and increase markedly at the onset of menstruation [24].

3.3 Experimental studies on alternative approaches used in ancient ages

Fennel: In aspect of fennel advised by Hippocrates; animal and clinical trial confirmed that fennel significantly reduces symptoms of primary dysmenorrhoea. Fennel essential oil (FEO) found to inhibit uterine contractions caused by prostaglandins E2 and oxytocin [25, 26].

Rose tea: Rose tea also proved safe, readily available and simple treatment for primary dysmenorrhoea in a single randomizes clinical trial [27].

Hart: Regarding Dioscorides's prescription for the horn of a hart to treat menstrual ailments, research found that "hart" was the British name for a male stag of the red deer species. In traditional Chinese medicine, red deer antler has been used to treat male impotence and gynecologic disorders in women. A recent animal study suggests that some antler velvet products may "produce anti-inflammatory compounds that assist in the regulation of prostaglandins [15]."

Ginger: Oral intake of ginger is found an effective remedy in pain relief of dysmenorrhoea by several studies. Gingerol is present in ginger have anti-inflammatory effects and inhibits cyclooxygenase and lipooxygenase pathways [28, 29].

Heat application: Concerning heat application on lower abdomen by ancient physicians, it has been showed that continuous, low-level, heat-wrap therapy applied to the suprapubic region is significantly reduced primary dysmenorrhoea [30].

Massage therapy: Regarding massage on lower abdomen with aromatic oil advocated by Rhazes, positive response in pain relief of dysmenorrhoea was seen by randomized clinical trial [31, 32].

4. Conclusion

Primary dysmenorrhoea is the most common reported disease by adolescents and young adults. The basic physiology behind the occurrence of painful menstruation is recently known, which can also provide a basis for the claims made by ancient physicians. Interestingly many herbs proved to be safe and effective in the management of dysmenorrhoea and they can be successfully applied in day to day practice, especially to control the moderate pain. Some issues are still remaining such as whether all natural approaches are efficacious to suppress the menstrual agony, for this there is a need to validate the efficacy and safety of various other proposals documented in ancient literature by well-designed experimental and clinical studies.

5. References

1. Moore TR, Reiter R. Gynaecology and Obstetrics. A Longitudinal Approach. New York: Churchill living stone; YNM, 773.
2. Cooper SL. Dysmenorrhoea a new approach to old problem. The Canadian nurse 1981; 77(9):50-2
3. Mayo LJ. A Healthy Menstrual Cycle. Clinical Nutrition Insights 1997; 5(9):1-8.
4. Montoya JS, Cabezza AH, Rojas OM, Navarreteand RC, Keeve MAV. Menstrual disorders in adolescents. Bol Med Hosp Infant Mex 2012; 69(1):60-72.
5. Gauga T, Tkeshelashvili B, Gagaa D. Primary dysmenorrhea leading problem of adolescent gynecology (Review). Georgian Medical News 2012; 207(6):7-13.
6. Dawood YM. Dysmenorrhea. Glob libr Women's med June, 2008.
7. Dysmenorrhea. The Neglected Syndrome. [cited on 25/3/2012] Available from <http://wholehealthmedia.com/Dysmenorrhea%20PDF.pdf>
8. Morrow C, Naumburg EH. Dysmenorrhoea. [Cited on 15/4/2013]. Available from pdf.edocr.com/26d094db527882e8df3e401eaa6d52e87a7f9352
9. Sue Reddish. Dysmenorrhoea. Australian Family Physician 2006 November; 35(11): 842.
10. Smith R, Jeffrey ELLIS. NSAIDs: Is newer better for dysmenorrhoea? The Journal of Family Practice. 2002; 4(7):4.
11. Sadek AA. History of Medicine - Some Aspects of

- Medicine in Pharonic Egypt. Australian Academy of Medicine and Surgery, 2001.
12. O' Dowd MJ, Philipp EE. The History of Obstetrics and Gynaecology. New York: The Parthenon Publishing Group, 2003, 17, 43, 47, 51, 262, 345-47.
 13. Fred M. Howard, Paul P, James C, Ahmed M. El-Minawi. Pelvic Pain: Diagnosis and Management. Philadelphia: Lippincott William & Wilkins, 2000, 100.
 14. Copeland LJ, Jarrell JF, McGregor JA. Textbook of Gynaecology. Philadelphia: WB Saunders Company, 1993, 398-403.
 15. Nezhat C, Nezhat F, Nezhat C. Endometriosis: ancient disease, ancient treatments. Fertility and sterility, 2012
 16. Razi ABZ. Al Hawi FilTib. Vol. 9, New Delhi: CCRUM, 2001, 151-68.
 17. IbnSina. Al Qanoon FilTib (Urdu trans. by Kantoori GH). New Delhi: Ejaz Publication house; 2010: 447-48.
 18. Majoosi ABA. Kamilus Sanaa (Urdu trans. by Kantoori GH) Vol I & II. New Delhi: Idarae Kitabul Shifa; 2010: Vol I 533-34. Vol II-128.
 19. Ali AH. KitabulMukhtaratFilTibb. (Urdu Translation) Vol II & IV. New Delhi: CCRUM; 2005: Vol II 257-58, Vol IV 30-32.
 20. Ahmad J. Tazkarae Jaleel. New Delhi; CCRUM; 2008; 353-54.
 21. Anonymous. Developing treatments. Royal pharmaceutical Society, 2008.
 22. Voto SJ, Essig GF. Primary dysmenorrhea: current concepts. Ohio State Med J 1984; 80(8):606-9.
 23. Jafaru IA, Justin CK. Leokotrienes in Gynecology: the hypothetical value of anti-leukotrienes therapy in dysmenorrhea and endometriosis. Human Reproduction Update 2000; 6(2):200-205.
 24. Akerlund M. Vasopressin and oxytocin in normal reproduction and in the patophysiology of preterm labour and primary dysmenorrhoea. Development of receptor antagonists for therapeutic use in these conditions. Annales Academiae Medicae Bialostocensis 2004; 49:18-21.
 25. Khorshidi N, Ostad SN, Mosaddegh M, Soodi M. Clinical Effects of Fennel Essential oil on Primary Dysmenorrhoea. Iranian Journal of Pharmaceutical Research 2003; 89-93.
 26. Omidvar S, Sedighe E, Baradaran M, Basirat Z. Effect of fennel on pain intensity in dysmenorrhea: A placebo-controlled trial. AYU 2012; 33(2):311-13.
 27. Tseng YF, Chen CH, Yang YH. Rose tea for relief of primary dysmenorrhoea in adolescents: a randomized controlled trial in Taiwan. J Midwifery Womens Health 2005; 50(5):51-7.
 28. Ozgoli G, Goli M, Moattar F. Comparison of Effects of Ginger, Mefenamic Acid, and Ibuprofen on Pain in Women with Primary Dysmenorrhea. The journal of alternative and complementary medicine 2009; 15(2):129-132.
 29. Rahnama P, Montazeri A, Huseini HF, Kianbakht S, Naser M. Effect of Zingiberofficinale R. rhizomes (ginger) on pain relief in primary dysmenorrhea: a placebo randomized trial. BMC Complementary and Alternative Medicine 2012; 12:92.
 30. Akin M, Price W, Rodriguez GJr, Erasala G, Hurley G, Smith RP. Continuous, low-level, topical heat wraps therapy as compared to acetaminophen for primary dysmenorrhoea. J Reprod Med 2004; 49(9):739-45.
 31. Ou M, Hsu TF, Lai AC, Lin YT, Lin CC. Pain relief assessment by aromatic essential oil massage on outpatients with primary dysmenorrhea: A randomized, double-blind clinical trial. J Obstet Gynaecol Res 2012; 38(5):817-822.
 32. Apay SE, Arslan S, Akpınar RB, Celebioglu A. Effect of Aromatherapy Massage on Dysmenorrhea in Turkish Students. Pain Management Nursing 2010; 13(4):236-240.