PAIN MANAGEMENT IN PRIMARY DYSMENORRHOEA AND ENDOMETRIOSIS- AYURVEDIC PERSPECTIVE

Asitha.H
Medical officer on contract, Govt.Ayurveda dispensary, Bharanikavu, Alappuzha, Kerala, India.

ABSTRACT

Pain is generally described as an unpleasant sensation and a universally understood sign of disease. Around 80% of women experience pain during periods from adolescent period right up to menopause. Dysmenorrhea literally means painful menstruation. Primary dysmenorrhea is one where there is no identifiable pelvic pathology. The pain begins a few hours before or just with the onset of menstruation and lasts for 24-48 hours. Secondary dysmenorrhea is normally considered to be menstruation–associated pain occurring in the presence of pelvic pathology. Pain starts 7-8 days before menstruation. Endometriosis is one of the main causes of secondary dysmenorrhea. Dysmenorrhea can be correlated to Udavarta and endometriosis to Vatiki. In Udavarta, Sanga and Vimargagamana of Vata and derangement of Kapha pitta is responsible for pain. In Vatiki there is Apana vata vimargagamana, Vyana vata and Pitta vitiation causes Artava dusti and Dusta artava sthana samsraya in Kha vaigunya sites. So administration of drugs and treatment modalities crackling these factors involved in the etiopathogenesis do the work. Ayurvedic classic textbook along with available modern literatures were referred to make a clear view regarding the concept of pain and the main Yonirogas causing pain during menstruation and its management.

KEYWORDS: Dysmenorrhea, Primary Dysmenorrhea, Endometriosis.

INTRODUCTION

The international association for study of pain defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage[1]. Arunadatta while commenting on Ashtanga hridaya mentioned that Rujati iti roga, means roga is that which causes pain. Susruta mentioned Vyadhis are the root cause of Dukha samyoga. Both Kaya and Mana can be considered as Adhistana of Ruja.

Menstrual period is a physiological phenomenon which occurs throughout the reproductive life of a woman. If this period of time remains uneventful is a bliss, though majority of women experiences certain degree of pain and distress. Even though primary dysmenorrhea is not a real threat of life it can affect the quality of life and can cause disability and inefficiency. Dysmenorrhea is the principal cause of recurrent short term work and school absenteeism in young girls and women. It can also cause mental problems in some of the women due to their reduced participation in different social activities.

Pelvic pain in women has both gynaecological and non-gynaecological cause. Pain of gynaecological origin may be due to primary dysmenorrhoa or due to any other underlying pelvic pathology. Menstruation associated pain occurring in the presence of pelvic pathology is secondary dysmenorrhea. The common causes of secondary dysmenorrhea are endometriosis, adenomyosis, uterine fibroid, endometrial polyp, chronic pelvic infection, uterine fibroid may cause dysmenorrhea due to associated pelvic congestion or endometriosis.

The prevalence of dysmenorrhea worldwide ranges 15.8-89.5% with a higher prevalence in adolescent girls[2]. Endometriosis affects 10-15% of women of reproductive age[3] Among these 70% of women suffer from chronic pelvic pain.

Due to its importance there are different pharmacological and non-pharmacological treatment methods like NSAIDs, herbal dietary management, yoga, acupuncture etc., but still this periodic agony of women remains as a burden to be managed. In this scenario, Ayurveda owes a cheaper and long-lasting protocol that leads to a better pain management system. In Ayurveda classics primary dysmenorrhea
is considered as *Udavarta* and endometriosis as Vatīki.

**Nirukti**

The word *Vedana* is derived from the root 'Vid' which means an experience. Experiences may be positive or favourable and negative or unfavourable. Favourable experience is *Sukha* and the unfavourable one is *Dukha*.

**Synonyms**

In classical texts of Ayurveda different terms such as *Ruja*, *Ruk*, *Vedana* and *Shoola* are commonly used for describing pain.

**Perception of pain**

The knowledge of *Sukha* and *Dukha* occurs as a result of the co-ordinated action of Atma, Mana, Budhi, Indriya, Indriyarta and Karma.

**Adhishtana of Ruja**

The seat or *Adhishtana* of Vedana is Mana and Indriyasahita sareera except the Kesa, Roma, Nagagra, Malamutra. Both Kaya and Mana can be considered as the Adhishtana of Ruja explicating the two extremes of concept of pain: pain as emotion and pain as a specific somatic sensation.

**Causes of Pain**

Arunadatta while commenting on Ashantagh hridaya mentioned that *Rujati iti roga*, means *roga* is that which causes pain[4]. According to *Susruta*, *vyadhis* are the root cause of *Dukha samyoga*[5]. Among Tridoshas vitiated *Vata* is responsible for pain.

**Role of Vata in Causing Pain**

As per the saying *Saveshu Eteshu Shooleshu Prayena Pavanah Prabhu*[6], by Madhavakara, *Vata* is the sole responsible for pain. It is responsible for generating and spreading of pain. This vitiation of *Vata* occurs in two ways, *Dhatukshhayajanya vata prakopa* and *Margaavarodha janya vata prakopa*. Similarly the *Ruksha guna* and *Chala guna* of *Vata* are mainly responsible for the manifestation of pain. Specific *Vata* can be considered as responsible for pain in a specific region such as: generalized pain is caused by *Vyana vayu*, headache by *Prana* and *Vyana vayu* abdominal pain by *Samana* and *Apana vayu* and chest pain by *Vyana* and *Prana vayu*.

**Chikitsa**

The treatment modalities such as *Sneha karma*, *Sweda karma*, *Agnikarma*, *Raktamoksha* by *Jalouka*, *lepana karma*, *Vasti* are described for the relief of pain due to various pathology. For the treatment of pain *Acharya Charaka* mentioned *Angamarda prasamana*, *Shoola prasamana* and *Vedanasthapaka mahakasaya*.

**Concept of Pain**

Pain is a universally understood sign of disease; it is also the most common symptom that causes people to seek medical attention. In Medical dictionary of Farlex pain is defined as an unpleasant feeling that conveyed to the brain by sensory neurons.[7] It occurs when the brain receive the signals from the point of pain through the sensory nerves. It may have a physical origin as a result of illness or injuries or it can have an emotional origin. Pain differs from the five classical sensory senses as it is both discriminative sensation and a graded emotional experience associated with actual or potential tissue damage. It is a submodality of somatic sensation.

**Etymology of Pain**

The word pain is derived from the Latin word "poena", which means punishment, penalty retribution, and indemnification.[8]

**Characteristics of Pain**

One main component of pain is its subjectivity. A stimulus to two individuals can result in two different reactions. So what could be painful to one person, can be less so to another. Pain threshold is the lowest intensity at which a given stimulus is perceived as painful; it is relatively constant across the subjects for a given stimulus. Pain tolerance, on the other hand is the greatest level of pain that a subject is prepared to endure. Tolerance varies much more widely across the subjects. Clinically pain tolerance is of much more importance than pain threshold.[9]

**Mechanism of Pain Pathway**

**Nociception**

Nociception is the detection of painful stimuli. It occurs through the membrane bound neuronal receptors at the nerve terminals that are getting activated by the exposure to specific noxious stimuli. This signal is then converted into an action potential and is propagated to the dorsal horn of the spinal cord. The noxious stimulation is communicated through the peripheral and central nervous system.[10] Nociception involves phases like transduction, transmission modulation and perception.

**Pain in Primary Dysmenorrhoea**

The uterus is richly supplied by both sympathetic and parasympathetic nerves, through the inferior hypogastric and ovarian plexuses. Sympathetic nerves from T12, L1 segment of spinal cord produce uterine contractions and vasoconstriction. The parasympathetic nerves (S2, S3, S4) produce uterine inhibition and vasodilation. However, these effects are complicated by the...
pronounced effects of hormones on genital tract.[11] Pain sensation from the body of uterus pass along the sympathetic nerves and from the cervix along the parasympathetic nerves.

The stimulation of pain fibres in the uterus causes activation of thefferent pain pathways transmitted up to the central nervous system. In addition there is some evidence of a direct effect on pain fibres themselves in cases of dysmenorrhoea. This theory is based on the potential effect of ischemia on pain fibres. Vasoconstiction leads to ischemia and it is thought that type C pain neurons are stimulated by the anaerobic metabolites generated by an ischemic endometrium.[12] It has also been suggested that leukotrienes can increase the sensitivity of pain fibres.[13]

Pain in Endometriosis

Secondary dysmenorrhoea is normally considered to be menstruation –associated pain occurring in the presence of pelvic pathology. The pain is dull, situated in the back and lower abdomen usually appears 3-5 days prior to the periods and relieves with the onset of bleeding. It mainly occurs in elderly or parous women. In secondary dysmenorrhoea intermenstrual period not completely free of pain and there will be no systemic discomfort. The most common cause of secondary dysmenorrhoea is endometriosis.

In endometriosis pain starts a few days prior to menstruation get worsened during menstruation and takes time even after cessation of period, to get relief of pain (co menstrual dysmenorrhoea). Pain usually begins after few years pain free menses. The site of pain is usually deep seated and on the back or rectum. Pain in women with endometriosis takes different way of exhibitionism in the sense as painful periods, painful intercourse (dyspareunia), painful defecation (dyschezia), painful urination (dysuria).

Cause of Pain

Increased secretion of PGF2α, thromboxane β2 from endometriotic tissue is the cause of pain. The pain varies from pelvic discomfort to lower abdominal pain or back ache. The causes of pain is multifactorial, may be due to peritoneal inflammation, tissue necrosis, adhesion formation, nerve irritation due to deep penetration or due to release of local inflammatory mediators, endometrioma formation.[14]

Pain Sensitivity in Dysmenorrhoeic Women

Women with dysmenorrhoea, compared with women without dysmenorrhoea, have greater sensitivity to experimental pain both within and outside areas of referred menstrual pain.[15] This enhanced pain sensitivity is evident even in phases of the menstrual cycle when women are not experiencing menstrual pain. It illustrates the long term differences in pain perception extend outside of the painful menstrual phase.

Pain and Sleep in Dysmenorrhoeic Women

Studies show that there is existence of an intricate relationship between pain and sleep. Compared with a pain – free phase of the menstrual cycle, when experiencing menstrual pain, women with severe primary dysmenorrhoea had reduced sleep efficiency, reduced rapid eye movement sleep, and increased stage I sleep.[16] The disturbed sleep observed in women with severe primary dysmenorrhoea during menstruation may heighten their sensitivity to pain.

Ayurvedic Principles and Modalities of Pain Management

Udavarta and Vatiki are the two main Yonirogas causing dysmenorrhoea. As Samprapti Vighatanam is Chikitsa, first going through the Samprapti and then the Ghatakas involved in Samprapti and later the Chikitsa.

Udavarta

Samprapti – Etiopathogenesis

By Nidana seva aggravation of Vata and derangement of Kapha occurs. The aggravated Vata especially Apana vata when faces Marga avarodha the normal Gati of Vata is affected and results in Vimarga gamana. In addition to this unusual contractions of cervix and body of uterus are associated. Thus along with the Vimargagamana of Vata there occurs Vimargagamana of Rajas. Due to this manifestation of severe pain and difficult discharge of frothy Rajas took place. All these events are contributing to difficulty in expulsion of Rajas or painful expulsion of Rajas.

Samprapti Ghatakas

Dosha - Vata, Kapha as Anubhanda dosha (Vata – Vyana, Apana,)
Pitta - Ranjaka, Pachaka
Dooshya - Rasa, Rakta,
Srotas - Artavavaha Srotas
Srotodushiti prakara - Sanga, Vimargagamana
Roga marga - Abhyantara
Prabhava sthana - Pakwasaya
Sthana samsraya - Garbhasya
Vyakta sthana - Garbhhasaya

Management

Snehana with Trivrita sneha (mixture of Grita, Taila, Vasu), Swedana, use of Gramya, Anupa, Audaka mamsa rasa, Vasti and Pana of Ksheera prepared with Dasamula, Anuvasana vasti and Uttara vasti with Trivrita sneha.[17] In Astanga samgraha it is
mentioned that Vatika yonirogas including Udadavarta all Vata hara upakrama should be done. Yoni pichu with Taila made up of Kashta, Tagara, Devadaru, Vartakini and Saindhava.\textsuperscript{118} Medicated oil prepared with decoction of Rasna, Malati, Chinnaruha, Madhuka, Bala, Vyaghri, Devadaru, roots of Chitraka, Yuthika each one Karsa, one Prastha of oil, cows urine and two parts of cows-milk. Diaper soaked in this oil and put into vagina relieves the pains caused by Anila.\textsuperscript{119}

Charaka mentions about Snehana with Trivritra sneha then Swedana and Dasamulapayobasti. It can also be adopted in Vatikichikitsa. Uttrara bhisti with Vata samana thaila and Ghrita can be done one week prior to menstruation. So before doing Sthanika chikitsa, Nasayana chikitsa is to be given to regain Dhatu bala. Lasuna, Satapushpa, Satavari rasayanas can be administered for regaining Dhatu bala.

Shamana Yogas

Saptasaram kasayam, Sukumaram kasayam, Dhanwantaram kasayam, Mahasrasadhi kasayam, Rasnasrni ksheerapaka, Vajopakunikadi kalka, Rajapravartini vati, Kumaryasavam, Asokarishtam, Dhanwantaram tailam, Sukumara ghritam, Higuvadi churnam are some of the Samana yogas.

Vatika

Samprapti – Etiopathogenesis

Due to the Vata vardhaka nidana seva there occurs Vata kopa, Vata dushti apana and Vyana vata causes Artava dushti. Vimargamana of Dushtha artava occurs and later Sthana samsraya at Kha Vaigunya sites like Kadi, Uras etc. Vata in association with Pitta causes pain due to inflammation and hormonal imbalance and Vata with Kapha association causes adhesion and scar tissue formation.

Samprapti Ghatakas

Dosha: Vata- Pradhana dosha (Apana vata, Vyana vata)
Pitta and Kapha - Anubandha dosha
Dushya: Dhatu – Rasa, Rakta

Upadhatu – Artava
Srotas: Artavavaha srotas
Srotodyushhti lakshana: Vimitragamana
Prabhava sthana: Garbhasyasa
Sthana samsraya: Kadi pradesha, Phuphusa, Scar, Sakti etc.

Management

After doing proper Agni deepana and Ama pachana start Snehana with Vata samana sneha sravyas like Narayana tailam, Sukumara ghritam, Mahanarayana tailam or Karpasasathyadi thailam. After proper Snehana-swedana, Virechana and Vasti with suitable drugs are advocated. After Sodhana administration of Uttaravasti is the next step. Sukumara ghrirat, Narayana tailam, Mahanarayana tailam, Karpasasyadi tailam, Dhanwantaram tailam are some of the Yogas suitable for doing Uttaravasti in Vatiki. Swedana procedures like Avagaha in Dasamula kashaya prior to menstruation also found to be effective in reducing pain. After Sodhana and Sthanika chikitsa, Nasayana chikitsa is administered to regain Dhatu bala.

Shamana Yogas

The Yogas having Anulomana in property is more suitable in this condition. Chiruvilwadi Kashayam, Gandharvahastadi kashayam, Saptasaram kashayam, Sukumaram kashayam, Abhayarishtam, Dantharishtam, Asokarishtam, Punarnavasavam, Hinguvachadi churnam, Yavakhsharam are some of the Shaman yogas used.

DISCUSSION

Nidana parivarjana is considered as Chikitsa so proper abstinence from Nidanasa causing Doshha imbalance, following Pathya ahara and Vihara and avoiding Apathyas contributing disease is advocated along with administration of medicines.

In Udadavarta administration of Vata kapha alleviating drugs and treatment is fruitful. So Vata Kapha samana with Pitta vardaka and Ushna teekshna guna facilitates Raja pravartana. Thus there is easy expulsion of Artava and relieves pain.

In Vatiki two steps of treatment is adopted. Langana chikitsa aiming Agnideepana and Ama pachana. After attaining Agnideepana and Ama pachana go for Brihmana chikitsa, it is for Vata samana. Vatahara chikitsa is mainly for alleviating pain. Anubandha doshas kapha and Pitta is to be normalised. Kaphahara helps in lysis of adhesions if present and Pittahara is done till Paittika symptoms subside.

CONCLUSION

Any addictive analgesics, antispasmodic administered for longer use for controlling pain is not good enough for health. This issue can be well addressed by Ayurvedic way of pain management. By doing treatment prior to menstruation the menstrual period in the following cycles will be painless or with mild degree of pain compared to previous cycles.

REFERENCES

1. https://www.iasp-pain.org accessed on 17/05/2020
2. Calis A, Popat V, Dang DK et al. Dysmenorrhoea. 2011; Available from: http://www.emedicine.medscape.com/article
3. https://www.ncbi.nlm.nih.gov
4. Sadashiva sastri paradkar. Ashtanga hridaya Arunadutta commentary Anna Moreshwar Kunde (Editor) reprint ed. Varanasi: Chaukambha Sanskrit sansthan; 2011. sutrasthana chapter 1, p.14
5. Srikanta Murthy KR, translator. Illustrated Susruta samhita, reprint ed. Varanasi: Chaukambha orientalia; 2010. sutrasthana chapter 1, p.8
6. Srikantamurthy KR, translator. Madhava nidanam, reprint ed. Varanasi: Chaukhambha orientalia; 2013. Chapter 26, p.97.
7. Kumar KH, Elavarasi P. Definition of pain and classification of pain disorders, Journal of advanced clinical and research insights 2016 May-June; 3(3). Available from: jcri.net>eJournals
8. http://www.etymonline.com accessed on 17/05/2020
9. http://www.sciencedirect.com accessed on 17/05/2020
10. William Renthal. Pain genetics, Rosenberg’s molecular and genetic basis of neurological and psychiatric disease 2015; 5th ed. Available from https://www.sciencedirect.com
11. Chaurasia BD. BD Chaurasia’s human anatomy, 4th ed. New Delhi: CBS publishers and distributors; 2004. Vol II: p.360
12. Yusoff Dawood M. Primary dysmenorrhea Advances in pathogenesis and management.
13. Narendra Malhotra, Pratap Kumar, Jaideep Malhotra et al. Jeffcoat's Principles of Gynaecology, 8th ed. New Delhi: Jaypee brothers medical publishers (p) Ltd: 2014. p.579
14. Dutta DC. DC Dutta's Textbook of Gynaecology, 7th ed. Kolkata: New central Book agency; 2016. p.
15. Stella lacovides, Ingrid Avidon, Fiona C. Baker. What we know about primary dysmenorrhea today: a critical review, Human reproductive update 2015 Nov/Dec; 21(6):762-778. Available from http://academic.oup.com
16. Iacovides S, Avidon I, Bentley A, Baker FC. Diclofenac potassium restores objective and subjective measures of sleep quality in women with primary dysmenorrhoea, sleep 2009; 32:1019-1026. Available from: https://www.ncbi.nlm.nih.gov>pubmed
17. Sharma RK, Bhagwan Dash. Charaka Samhita text with English translation and critical exposition. Reprint Ed. Varanasi: Chaukambha Sanskrit series office; 2008. Vol V: Chapter 30, p.157.
18. Srikanta Murthy KR, translator. Ashtanga Samgraha of Vagbhata reprint ed. Varanasi: Chaukambha orientalia; 2012. Vol III: uttarasthana Chapter 39, p.341.
19. Srikanta Murthy KR, translator. Ashtanga Samgraha of Vagbhata reprint ed. Varanasi: Chaukambha orientalia; 2012. Vol III: Uttarasthana Chapter 39, p.341.

Cite this article as: 
Asitha. H. Pain Management in Primary Dysmenorrhea and Endometriosis- Ayurvedic Perspective. International Journal of Ayurveda and Pharma Research. 2021;9(2):84-88.

Source of support: Nil, Conflict of interest: None Declared

*Address for correspondence
Dr. Asitha.H
Medical officer on contract, Govt.Ayurveda dispensary, Bharanikavu, Alappuzha, Kerala.
Mobile: 8281573597
Email: asithahari@gmail.com

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.