

Menstrual Abdominal Migraine: An Observational Study

MV Francis

Eye and Migraine Centre, Cherthala, Alleppey District, Kerala, India*

ABSTRACT

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Objective: Evaluation of abdominal pains of menstrual origin in mothers of children with migraine.

Materials and methods: A study spanning 4 years, from April 2004 to September 2008 was done. The study was conducted at the Eye and Migraine Centre, Cherthala and St. Sebastian's Visitation Hospital, Arthunkal. Four thousand mothers with migraine (migraine without aura, with aura and probable migraine) were queried regarding menstrual pains (head pain and abdominal pain) when they presented with their children who had headaches of migraine origin.

Results: While only 14 per cent (562) had menstrual migraine (day 1 plus or minus 2 days of menstrual cycle), 72 per cent (2882) reported dysmenorrhoea, either at the time of presentation or sometime in the past (mostly before first pregnancy) and in 61 per cent (2441) of them, severe lower abdominal pain similar to dysmenorrhoea was associated with anorexia/ nausea/ vomiting/ phonophobia and photophobia, all suggestive of a diagnosis of lower abdominal migraine.

Conclusion: The present study concludes that lower abdominal pains resembling abdominal migraines are very common in female migraineurs during menstruation and it can occur without typical IHS (International Headache Society) migraine or probable migraine head pain. Dysmenorrhoea, present or past, must be specifically enquired into, while taking headache history from mothers. If severe lower abdominal pains with migraine-associated features are present, it can be considered as lower abdominal migraine or migraine trait. This history helps in diagnosing early migraines in their children easier.

Keywords: Migraine, Menstrual headache, Clinical features.

*See End Note for complete author details

INTRODUCTION

For centuries, women with migraine have been labeled neurotic - a not so uncommon explanation for conditions linked to hormones. Women have headaches more commonly than men. Specific hormonal events during the reproductive years have a profound influence on migraine in women. Onset of migraine is usually after menarche, during the teens and early 20s. Prevalence of migraine peaks during the early 40s and improves post-menopause. At this time, many women report an association between migraine without aura and menstruation, with attacks most likely to occur on or around the first day of bleeding. Although studies suggest that withdrawal of estrogen in the late luteal phase of the normal menstrual cycle is involved in the mechanism of menstrual migraine, it is not well understood how exactly the changes in estrogen levels influence migraine. Fluctuations in estrogen levels can cause prostaglandin release and changes in neurotransmitters, including noradrenaline, serotonin, dopamine and endorphins.

As part of documenting various common diagnostic migraine triggers including menstruation, during the

early part of my Periorbital Headache¹ study, which started in 1993, a chance observation was made on the relationship between migraine and dysmenorrhoea.² This was prior to the publication of ICHD-2 (International classification of headache disorders) in 2004. Many female migraine patients, when interviewed, reported severe lower abdominal pains with migraine-associated features (anorexia, nausea, vomiting, phonophobia and photophobia) rather than migraine head pains of menstrual origin. A prospective study was undertaken to document these abdominal pains based on ICHD-2 diagnostic criteria.³

MATERIALS AND METHODS

Four thousand mothers with migraine in the age group of 30 to 60 years attending the out-patient departments from April 2004 to September 2008 were included in the study. Migraine and its sub-types including abdominal migraines were diagnosed according to ICHD-2 diagnostic criteria published in 2004.

Diagnostic criteria for abdominal migraine:

- Five attacks

Corresponding Author:

Dr. MV Francis, MS, Chief Consultant, Eye and Migraine Centre, Cherthala, Alleppey District, Kerala, India.
E-mail: mvfrancis@rediffmail.com Phone: +91-478-2821091

- 1 to 72 hours duration
- Midline location, periumbilical or poorly localized
- Dull or just sore in quality
- Of moderate or severe intensity
- During abdominal pain, at least 2 of the following associated features (anorexia/nausea /vomiting / pallor)
- Not attributed to another disorder (particularly if history and physical examination do not show signs of gastrointestinal or renal disease, or such disease has been ruled out by appropriate investigations)

RESULTS

Menstrual migraine was found only in 14 per cent (562) of mothers and dysmenorrhoea in 72 per cent (2882). Severe dysmenorrhoea with migraine associated features was found in 61 per cent (2441).

Area of pain: Other than lower abdominal region, periumbilical, suprapubic, lower back, upper thigh and legs also were involved in majority of the women studied.

Quality of pain: Different descriptions such as migraine pain, sharp, throbbing, dull ache, burning, shooting pain and pains that are inexplicable.

Associated features: Anorexia and nausea (431), anorexia and vomiting (677), nausea and phonophobia (543), anorexia, phonophobia and photophobia (402), all associated symptoms (388).

Pallor is one of the associated features in paediatric abdominal migraine but was not reported by any of the migraine-affected mothers in this study.

Duration of pain: A large majority (82 per cent) reported pain lasting one whole day. Like brief migraine headaches and abdominal migraines, it lasted for 30 minutes to 3 hours in 16 per cent of patients. The remaining reported duration of pain varying from more than one day to the end of menstruation. In 62 per cent, pain subsided after the first pregnancy and in 14 per cent it reappeared either after second or third delivery or later without any apparent reason. Eight percent of women started experiencing dysmenorrhic symptoms either after their first or second deliveries.

Nearly three out of five women described their pain as severe, affecting their day to day activities. The rest described it as mild to moderate which hindered their daily activities but could cope with it. The other mi-

graine-related symptoms reported were dizziness and vertigo, increased appetite, bad temper, irritability, fatigue, diarrhea, increased urination, confusion, disorientation and lack of energy.

Table 1. A total number of 4000 mothers were interviewed. The types of migraines diagnosed are included

Type of migraine	Number of patients (%)
Migraine without aura	2080(52%)
Probable migraine without aura	1632(40.8%)
Migraine with typical auroa	128(3.2%)
Probable migraine with aura	112(2.8%)
Typical aura with non-migraine headache	36(0.9%)

DISCUSSION

Headache classification committee of the International Headache Society has not yet agreed on a definition for menstrual migraine. It is included in the Appendix Criteria³ as they have not been sufficiently validated by research studies and due to uncertainty over whether they should be regarded as separate entities. Abdominal migraines are included in the official criteria as a part of Childhood Periodic Syndromes; the other entities in this subgroup are Cyclical Vomiting and Benign Paroxysmal Vertigo of childhood. These syndromes are rare in clinical practice and no significant studies have been done in India and other Asian countries.

The current study found that the percentage of migraine-affected women who report menstrual - origin abdominal pain is significantly high.

To the best of my knowledge (Medline search), this is the first study to document a correlation between migraine, menstruation and lower abdominal pains. This study shows that more than 60per cent of female migraineurs suffer from severe lower abdominal pains resembling abdominal migraines in children and adolescents. During the study period of 4 years, 66 non-migraine-affected mothers reported severe dysmenorrhoea with migrainous autonomic symptoms which helped in diagnosing brief or early migraines in their children.⁴

Balbi and colleagues,⁵ cite 85 per cent of 14-21 year age group suffers from dysmenorrhoea whereas Coco⁶ shows prevalence of 90 per cent. A study done on a Belgian group aged 15 to 24 years, the prevalence rate was only 42 per cent.⁷ None of these studies have dealt with migraine.

According to Coco, primary dysmenorrhoea is so common that many women fail to report it in medical interviews, even when their daily activities are restricted.

This study supports that observation. Most of these mothers and their daughters are told by the older women in the family that these pains are physiological and no need of any medications other than usual home remedies.

Most of the mothers claim to adapt well to some monthly hindrance of their activities but their daughters always wanted relief from these pains provided the drugs prescribed are safe. Some medical practitioners also have contributed to their fears by stating that it is always better to avoid medications for dysmenorrhea. Some of them opted for complimentary and alternative medications because of such advice.

While abdominal migraines are seen in female children before menarche, studies show that most children with abdominal migraine will develop migraine headache later in life. Migraine-associated features involving the gastrointestinal tract, like vomiting, nausea and diarrhoea^{8,9} were the most distressing symptoms in many dysmenorrhic mothers. Premonitory migraine symptoms (occurring hours to days before headache) such as fatigue, lethargy, disorientation, anger and rage too were reported by some. These symptoms are now considered to be part of the broader syndrome named Premenstrual Syndrome (PMS) with more than 200 different symptoms identified or Premenstrual Dysphoric Disorder, a more severe form of PMS.

The results of this study on the characteristic of menstrual abdominal pain and how it is handled, clearly reinforce currently available data that severe dysmenorrhea is a syndrome that seriously undermines the quality of life of the women affected, just like migraine head-pain and thus requires a thorough therapeutic approach by health care professionals.

CONCLUSION

All women with migraine are susceptible to the effects of hormonal changes. Migraine and severe dysmenorrhea are remarkably common causes of temporary disability. Still many women, even those with disabling pains, have never consulted a physician for the problem. Severe lower abdominal pains resembling abdominal migraines in children are very common in female migraineurs during menstruation, and it can occur without typical I H S migraine or probable migraine head-pains. Dysmenorrhic symptoms with migrainous autonomic features which affect daily activities must be specifically enquired into while taking headache history. If severe lower abdominal pain, along with migraine-associated

features is present, it can be considered as a migraine trait or lower abdominal migraine. Diagnosing early or brief migraine in their children will be made simpler in such circumstances.

END NOTE

Author Information

Dr. MV Francis, MS, Chief Consultant, Eye and Migraine Centre, Cherthala, Alleppey District, Kerala, India. Phone: +91-478-2821091. E-mail: mvfrancis@rediffmail.com

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