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EFFICIENT MICROWAVE SYNTHESIS OF COUMARIN DERIVATIVES WITH EVALUATION OF THEIR ANTIOXIDANT AND ANTI-INFLAMMATORY PROPERTIES

ANZIYA P A, SARANYA T S, ANJALI K, ANJALI KRISHNA, SINI BABY, DIVINE P DANIEL

Pages 124-130

[VIEW PDF](#)

COSMETIC USE RELATED ADVERSE EVENTS AND NEED FOR COSMETOVIGILANCE

MERRIN JOSEPH, KARISHMA SHAJI, MAHIN T M, NANDANA P B, KRISHNA DAS

Pages 64-71

[VIEW PDF](#)

A RETROSPECTIVE STUDY OF CLINICAL PROFILE OF VIPER BITE CASES IN SELECTED HOSPITALS IN CENTRAL KERALA

ANUMOL SAJU, ANTRIYA ANNIE TOM, ABY PAUL, SWAPNA SAJU, DONA JOHNSON, JESYLN JOE THOMAS, KUTTIKADEN JOY STEFFI, JOYAL M JOLL

Pages 72-74

[VIEW PDF](#)

FORMULATION AND EVALUATION OF HERBAL TOOTHPASTE CONTAINING EUPATORIUM TRIPLINERVISLEAF EXTRACT

VIDYA PETER, ROSNA BABU , SHERRY SEBASTIAN, ANGEL JAEMON, ANGEL JAEMON, ANAGHA V T, JEEVAN SAJEEV

Pages 36-41

[VIEW PDF](#)

IN VITRO SCREENING OF ICACINACEOUS PLANTS INDIGENOUS TO KERALA

DR.ELIZABETH ABRAHAM P, FRINTO FRANCIS, PRADEEP R NAIR, ATHUL RAJ, RAJI RAJAN, ANAMIKA K. NAIR, PROF.DR.BADMANABAN.R

Pages 51-58

[VIEW PDF](#)

FORMULATION AND EVALUATION OF BUCCAL FILM OF AN ANTIHYPERTENSIVE DRUG

ASHINAA BENEDICT, IRIN ROSE PAUL, DR. MANJU MARIA MATHEWS, DR. BADMANABAN R

Pages 75-80

[VIEW PDF](#)

A PROSPECTIVE SURVEY TO ASCERTAIN THE SYMPTOMS, HEALTH ISSUES AND SUBSEQUENT OTC MEDICATION USAGE DURING MENSTRUATION AMONG COLLEGE STUDENTS

MIINTU GEORGE, ANAGHA MELBIN, MARY PAUL DOMINIC, RESHMA DOMINIC, AYSHA SAJA P.S, **JOBIN KUNJUMON**

Pages 81-84

VILAPURATHU

[VIEW PDF](#)

A CROSS SECTIONAL STUDY TO ANALYSE THE ADR REPORTED IN A HOSPITAL DURING THE PAST THREE YEARS

SANGEETHA SUKUMARAN, VARSHA ELIZABETH JOBY, AMALA JOSEPH, APARNA JESTIN, JITHIN N P, SUMAYYA B MUHAMMED, SUNU SEBASTIAN, JOBIN KUNJUMON VILAPURATHU

Pages 85-89

[VIEW PDF](#)

FORMULATION AND EVALUATION OF PREUNGUAL DELIVERY SYSTEM CONTAINING EUGENOL FOR THE TREATMENT OF ONYCHOMYCOSIS

MINI ELIAS, FLOWERLET MATHEW, GOURISREE T, ANILA RAJAN, ASHLY DAVIS

Pages 90-94

[VIEW PDF](#)

FORMULATION AND EVALUATION OF FLOATING CONTROLLED DRUG DELIVERY OF ANTI-ULCER DRUG LOADED MICROBALLOONS

BINDUMOL K C, FLOWERLET MATHEW, SHALOM SUNIL, ANGEL JOSE

Pages 95-100

[VIEW PDF](#)

PREPARATION AND EVALUATION OF FLOATING DRUG DELIVERY SYSTEM (FDSD) CONTAINING AN ANTIVIRAL DRUG

TEENA MOHAN, MARIYA SUNNY, MANJU MARIA MATHEWS, BADMANABAN R

Pages 105-109

[VIEW PDF](#)

FORMULATION AND EVALUATION OF CONTROLLED POROSITY ORAL OSMOTIC PUMP TABLETS OF FUROSEMIDE

TEENA CHACKOCHEN THEKKAL, REBA RENJU, MANJU MARIA MATHEWS, BADMANABAN R

Pages 110-113

[VIEW PDF](#)

FORMULATION AND EVALUATION OF TOPICAL GELS INCORPORATED WITH SOLID DISPERSIONS OF AN ANTIINFLAMMATORY DRUG

SETHU LEKSHMI, THERASE JOSE, MANJU MARIA MATHEWS, BADMANABAN R


Pages 114-119

[VIEW PDF](#)

IN VITRO ANTI-BACTERIAL SCREENING OF DRYNARIYA QUERCIFOLIA

ASHNA T, LINS MARY JOY, SIYARA ANTONY, SINDU T J, SHEEBA MOL P, SHUJI T S, SOUMYA K GEORGE

Pages 120-123


 [VIEW PDF](#)

CASE REPORT(S)

GUILLAIN-BARRE SYNDROME: A PAEDIATRIC CASE SCENARIO IN A TERTIARY CARE HOSPITAL AT SOUTHERN INDIA

NEVIN JOSEPH, ALFIN BABY, ELDHOSE ELIAS GEORGE, GOPIKRISHNAN T.S, MERRIN JOSEPH

Pages 101-104

 [VIEW PDF](#)

[Announcements](#) || [Editorial Board](#) || [Indexing](#) || [Contact](#)

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A PROSPECTIVE SURVEY TO ASCERTAIN THE SYMPTOMS, HEALTH ISSUES AND SUBSEQUENT OTC MEDICATION USAGE DURING MENSTRUATION AMONG COLLEGE STUDENTS

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Abstract

Up to 14 days before your period begins, you might see bulging, Migraines, temperament swings, or other physical and enthusiastic changes. These Month to month side effects are known as premenstrual disorder, or PMS. Around 85% of ladies experience some level of PMS. A couple have more serious. Manifestations that disturb work or individual connections, known as premenstrual Dysphoric problem (PMDD). The etiology of these disorders remains uncertain, Research suggests that altered regulation of neurohormones and neurotransmitters is involved. Study Site: college students studying in Nirmala College of pharmacy Muvattupuzha. Design: The study will be done as an online survey using Google form. The Developed questionnaire consists of knowledge of premenstrual syndrome, Quality of Life, Medication. Conclusion: Premenstrual syndrome and premenstrual dysphoric disorder are Complex but highly treatable disorder and can improved by providing patient education on Premenstrual symptoms and counseling women on lifestyle interventions.



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Introduction

Menstruation, also known as menses, is the regular discharge of blood and mucosal tissue from the inner lining of the uterus through the vagina. It is a part of the menstrual cycle. The first occurrence of the menstrual cycle is called menarche. However periods may occasionally start within the age of 12- 15. The decline in reproductive hormones leads to menopause, when a woman reaches 40s-50s [1]. A group of symptoms that occur in woman typically between ovulation and a period called premenstrual syndrome (PMS) [2]. Symptoms included changes in appetite, weight gain, abdominal pain, back pain,

low back pain, headache, swelling and tenderness of the breasts, nausea, constipation, anxiety, anger, restlessness, mood swings and crying, depression, food craving, fatigue, irritability etc [3]. Most women have at least one sign of PMS each month. But it's not the same for everyone.

The etiology of premenstrual syndrome appears to be related to ovarian function, as suppression of ovarian hormone secretion markedly attenuates PMS. Disproportion of hormones like progesterone deficiency and oestrogen surplus have been proposed. Oestrogen comprises three major hormones mood swings are associated with fluctuations in oestrogen level during the luteal phase. Intake of coffee, junk food and other lifestyle factors also lead to PMS [4]. Recurrent changes in chemicals, synthetic changes in the cerebrum, existing psychological well-being conditions are also included. The pathophysiology of premenstrual disorder is intricate, uncertain, and isn't completely perceived [5]. Several clinical entities can have a manifestation similar to premenstrual syndrome. They include psychiatric conditions like substance abuse disorders, affective disorder (e.g., depression, anxiety,

dysthymia, and panic), anaemia, anorexia and gynecological conditions like endometriosis, dysmenorrhea, medical conditions like hypothyroidism and others like oral contraceptive pill (OCP) use, or peri-menopause [6]. Blend of pharmacotherapies (like NSAIDS, SSRIs, anxiolytic specialists, gonadotropin- delivering chemical (GNRH) agonists, spironolactone, oral prophylactic pills) with non-pharmacological medicines, basically intellectual and social treatments, works out, knead treatment, light treatment alongside dietary and healthful adjustments have been demonstrated valuable for the treatment of premenstrual symptoms. Lifestyle modifications include regular exercise, avoiding stressful events, and maintaining healthy sleeping habits, especially during the premenstrual period [4, 7, 8].

Material and Methods

Study design: The study was done as a prospective online survey using Google form. The developed questionnaire consisted of knowledge of premenstrual syndrome, quality of life, medication.

Study site: The study was conducted among them and they cooperated with the study and the study was recorded.

Sample size: Estimated to be not less than 400 students.

Study population: The students of Nirmala College of Pharmacy, Muvattupuzha, in the year of 2021-2022 and who satisfied the inclusion and exclusion criteria were selected for the study.

Selection of study population:

Inclusion Criteria: All female students willing to take part in the study. Age: 18-25.

Exclusion criteria: Subjects who are unable to provide informed consent

Study period: The study period was carried out for a period of one and half year starting from February 2021 to March 2022.

Data collection: The pre-designed questionnaires were given to the interested respondents through Google Form and the data was collected and recorded. Data collection tools: Google form: The study was done as an online survey using Google form. The developed questionnaire consisted of knowledge of premenstrual syndrome, quality of life, medication. Data Collection: The process will involve collection of data from college students. The Google form was chosen to be the medium for the distribution of the questionnaire. The developed questionnaire was encrypted in the web page before it can be distributed to most of the social networks, WhatsApp. The link to the online survey was also forwarded to the respondents who agreed to participate through email.

Data collection form: The data collection form includes the following details: Demographic details: First part includes mail id, consent, age, weight, sex. Knowledge of premenstrual syndrome: second part include whether the menstruation is regular, have PMS symptoms, combination of symptoms, assessment of premenstrual syndrome.

Quality of life: Third part include how symptoms adversely affects, questionnaire was used to evaluate four domains of the quality of life of the students physical, mental, social relationships, and environmental.

Medication: Fourth part include medication used in this condition. Methodology: The study proposal was approved by the ethics committee of the Nirmala College of Pharmacy,

Muvattupuzha. The concerned authority of the 2 centres approved the study protocol and permitted to conduct the study.

Data collection was carried out through 4 phases: Phase 1- The respondents who met the study criteria were informed about the study. Procedure and were enrolled into the study after obtaining their informed consent. Demographic data were collected and entered into the data collection form which includes age, gender, and weight. These were collected through the predesigned questioners. The survey was conducted for the assessment of symptoms and health issues related with premenstrual syndrome and subsequent OTC medication usage among college students. The survey was conducted through questionnaire which consisted of 21 items that were distributed into 4 sections. First part include. Questions from 4-12 consist whether menstruation regular or not, having PMS symptoms including headache, bloating, stomach ache, vomiting, loss of energy, fatigue. 13-18 questions contain quality of life related questions which include difficulty in sleeping, paying attention in class, depression, and craving. Pre-menstrual syndrome awareness session: Under the Department of Pharmacy Practice in association with Women Cell, Nirmala College of Pharmacy, we had organized an awareness session on the topic "Premenstrual syndrome". Providing information to students to know more about the condition and to find out the techniques with which they can avoid the difficulties. The awareness session conducted on 18-December -2021, in seminar hall under the guidance of Mr. Jobin Kunjumon. The session was organized for the first year B pharm students and around 60 students participated the session

Result and Discussion

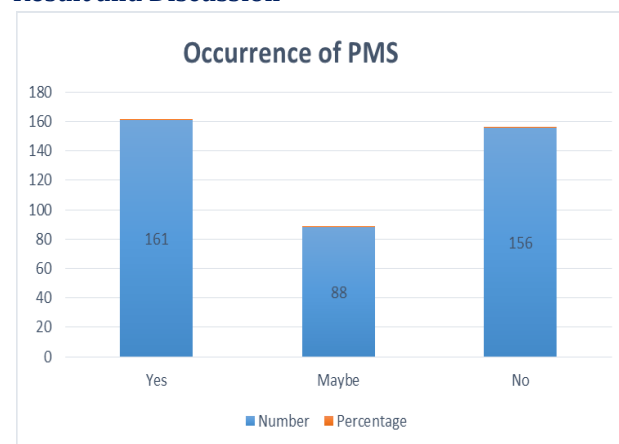


Figure 1 Occurrence of PMS

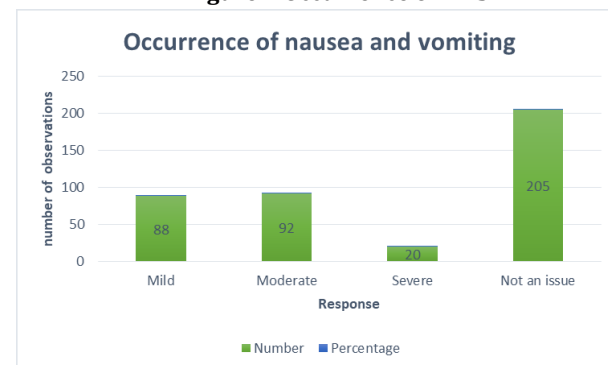


Figure 2 Occurrence of nausea and vomiting

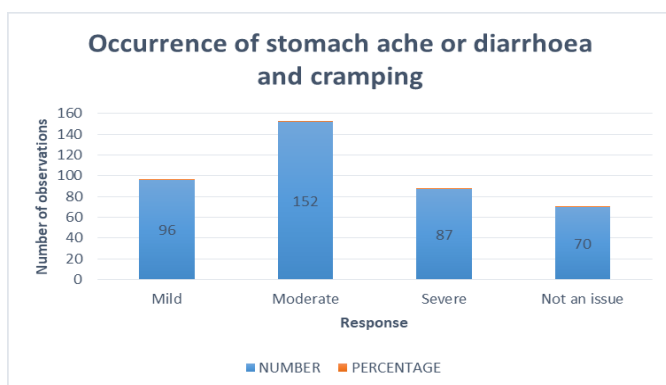


Figure 3 Occurrence of stomach ache or diarrhoea and cramping

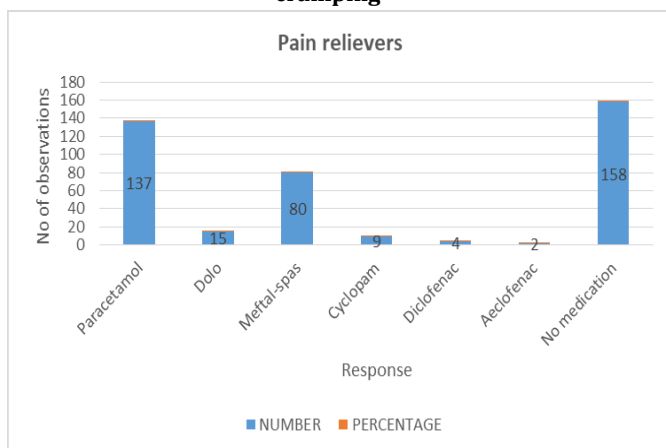


Figure 4 Pain relievers

The study finding involved collection of data from 405 college students. The collected data, which involved 18 questions related to premenstrual syndrome, were compiled and entered into a Microsoft Excel workbook for ease in scrutinization and calculation. The educational status got influenced by involving the students of college, and the study was focused on female students. As per the graph (figure 1) and table plotted for the incidence of PMS among population, it was found that 39.7% of the respondents answered "yes" to the question and 38.5% indicated that they did not have this issue. About 21.7% were not sure about the incidence of PMS. Premenstrual syndrome is a condition that necessitates awareness as it can decrease the severity and prevent its development into premenstrual dysphoric disorder, which is a worst condition of PM so that education programmes are frequently conducted to evaluate its efficiency in alleviating the severity of PMS symptoms. Studies were carried out regarding the same, and it was found that the girls could enhance their knowledge scores as well as a drastic reduction in their PMS scores. Also, many of the women are not sure about whether they go through the condition of PMS, and therefore lack proper treatment and other necessary precautions (9). In another question (figure 2), respondents were asked whether they experienced nausea or vomiting. 50.6% responded that they had no such issues, while 22.7% had moderate level of such problem. About 21.7% participants had mild level of this issue. Only about 4.9% individuals had experienced this in a severe form. Near the start of your period, prostaglandin level increases which lead to nausea. Sometimes it may also cause vomiting. Hormonal changes also contribute to this. Some measures help in quick relief. Give a cool

compress on the forehead, include bland foods and eat small meals frequently that help in maintaining normal blood glucose level, doing a moderate exercise, and drinking enough water are some of the relief measures. Ginger, chamomile, peppermint, and essential oils are some of the natural remedies for this. Chamomile acts as a digestive relaxant. But aroma therapy using essential oils has not given enough evidence in reducing nausea. Vitamin b-6 and NSAIDS give long term relief. Folic acid, Calcium with vitamin D, Magnesium and Vitamin E may also help [10]. In another question (figure 3), respondents were asked if any kind of stomach ache, diarrhoea and cramping occurred. 37.5% responded that they had moderately and 21.7% participants had mildly experienced this. About 21.4% had severe stomach ache, diarrhoea and cramping. Only 17.2% does not have such an issue. Too many prostaglandins produced from uterus is primarily responsible for cramping, stomach ache etc. Prostaglandins lead to tightening and relaxation of muscles that cause cramps. This hormone rises to its peak right before the period starts. Cramping feels like immense pressure in the pelvic region that mimics contraction. Changing hormonal levels affects the tissue, causing inflammation and pain and may generate cramps even two weeks before the period. There are several home remedies for alleviating the premenstrual cramps. Always stay hydrated, take hot baths, and use hot bags, practice yoga and other mild exercises that helps in relaxing the uterine muscles. The prostaglandins that are produced during premenstrual period also trigger contractions of the intestine that lead to gastrointestinal symptoms like diarrhoea. The hormone enhances electrolyte secretions that contribute to diarrhoea. Foods such as spicy ones, caffeine, dairy products, and artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that help restoring the gut bacteria. Ibuprofen decreases the effects of prostaglandins in the body. Over the counter anti-diarrheal medications will also help in this. Mild exercises can be practiced since excessive physical activity may worsen it. Stress and anxiety should also be minimized so as to reduce diarrhoea and cramping [11]. From assessing the data (figure 4.1), it was found that about 39% were not taking any medications as pain relievers. Most of the people were having paracetamol and 19.8% were having meftal-spas. 3.7% of the participants stated that they had been using Dolo and about 2.2% used cyclopam, whereas 0.9% were using diclofenac. Only a negligible portion of the respondents 0.5% had acetofenac as pain reliever. Meftal-Spas act as pain reliever as well as reduce inflammation in the body. It is a non-steroidal anti-inflammatory drug. Cyclopam improves menstrual cramps. It is an alternative to Meftal-Spas. Diclofenac restores physical performance along with relieving pain [12].

Conclusion

Therefore, we can conclude that Premenstrual syndrome is a prevalent condition in college students. 39.7% of the respondents were sure that they were having PMS. These participants experienced the symptoms in one or the other way such as in a moderate, mild, rare, often, very often or sometimes. Both physical and psychological issues were found out. Many of the women are not sure about whether the go through the condition of PMS and therefore lack proper

treatment and other necessary precautions. Fluctuating levels of progesterone and estrogen are responsible for mild and severe headaches during PMS. They can be prevented in some of the ways like- engaging in a physical activity, dietary changes, proper sleep, preventive medications, management of stress etc. Changes in hormone levels provoke negative emotions like irritability and anger. If there is frequent fluctuations in mood, it is better to consult a doctor. Vitamin b-6, NSAIDs give long term relief in nausea and vomiting. Too many prostaglandins produced from uterus is primarily responsible for cramping, Foods such as spicy ones, caffeine, dairy products, artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that helps restoring the gut bacteria. Stomach ache etc. Foods such as spicy ones, caffeine, dairy products, and artificial sweeteners must be avoided. Include more fibre containing foods. Also add probiotic foods that helps restoring the gut bacteria. Prevalence of premenstrual syndrome among college students necessitates helping and supporting individuals who suffer a lot. Providing awareness regarding PMS is a mandatory. Several educational programs can be established such as traditional educational system or by using novel technological methods.

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Conflict of interest

Nil

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