

### 31 - DYSMENORRHEA INCIDENCE IN ACADEMIC FEMALE STUDENTS OF A COLLEGE IN CASCAVEL – PR

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#### INTRODUCTION

Dysmenorrhea, according to Lima and Baracat (1995), derives from Greek and it means difficult or uncomfortable menstruation. The womb pain is the center of symptoms such as paleness, sweatiness, headache, nausea, vomit, increase in the number of evacuations, unconsciousness, lumbar and lower limb pain.

For Halbe (2000) 50% of women suffer some discomfort during their menstrual period, but the disturb becomes troublesome in 5 to 10% of them, and according to Bortoletto et al (1995) half of the women in their youth reported they had menstrual pain on the first days of their period in a serious and disabling way.

Dysmenorrhea is classified in two ways: primary and secondary. For Polden (2000), intrinsic primary dysmenorrhea, essential or idiopathic, occurs in women who don't present any organic pelvic disease and it's generally associated with the ovarian cycles, generally beginning 6 to 18 months after the menarche.

According to Halbe (2000) there are many theories to explain the primary dysmenorrhea. The main theories are: vascular spasm due to exaggerated vasoconstriction; the endometrial arterioles will produce ischemia and consequently pain; muscular spasm due to exaggerated and uncoordinated womb contraction or a hypersensitivity to normal contraction; muscular and vascular spasms where the uncoordinated contractions aggravate the anoxia and the pain; endocrine where dysmenorrhea occurs in ovulatory cycles, when there is the action of progesterone. When the ocitocin levels are low, the vasopressin acts inducing to painful and arrhythmic contractions. And the prostaglandin, the theory that has the most therapeutic connotation. This substance stimulates the contraction of smooth muscles, Benson (1981) suggested the presence of a substance (prostaglandin alpha F2 and E2) in the menstrual fluid which would take to a hypercontraction of the miometry.

Cardoso and Leme (2003) state that the cause for primary dysmenorrhea is related to the growth in the production of prostaglandins (mainly alpha PGF2), which reaches a peak on the two first days of the period.

Besides the fact that prostaglandins increase the amplitude and frequency of womb contractions, it also powers the painful sensation by making nerve terminals more sensitive, intensifying the symptoms. (VIANA; GERBER, 2001).

According to Abraham (1983), the symptoms of dysminorrhea can be divided into 2 groups: somatic and psychic. Congestive states are among the most common somatic symptoms which affect mainly the breasts, abdomen and pelvis, the hydric retention and other manifestations like migraines, vaginal secretion, increase, generalized pain, anorexia, appetite increase, diarrhea, constipation, sweatiness, acne, herpes, insomnia, asthmatic crisis, temporary weight gain, thyroid hypertrophy, aerophagy, hypoglycaemia and convulsion.

Disability to concentrate, affective lability, sleep disorders, aggressiveness, irritability, nerve tension, unstable mood, depression, anxiety, crying crisis and discouragement are among the most frequent physic symptoms. (ISRAEL, 1969; ABRAHAM, 1983; BARACAT 1999).

However, according to Lima and Baracat (1995), the main symptom of primary dysmenorrhea is the painful clinical state on the abdomen region and lumbar sacral region with irradiation to the thighs.

Halve (2000) reports that the pain happens several days before the menstrual period or some hours before vaginal bleeding, disabling women to perform their daily activities.

#### METHODOLOGY

The research was accomplished through a field, epidemiological, quantitative of transversal cut study and it aimed the female students of the physiotherapy course of a college in Cascavel – PR. For the students who agreed to participate in the research, an interview-like questionnaire was applied. This questionnaire was made of 19 questions related to dysmenorrhea. The results were presented in tables in percentage form.

This research began after the approval of the Ethical Committee for research with human beings.

#### RESULTS

Among the interviewees, 87% had the incidence of menstrual cramps in the family and only 10% didn't have. In relation to the pain, in a pain scale ranging from 0 to 10, 20% reported an average of 5, and 39% chose between 6 to 8 for the intensity of the pain during their periods and only 16% chose between 9 and 10. 40% of the interviewees reported pain decrease along the time, while 33% reported pain increase, and 23% kept the same intensity. In relation to the region of pain, 14% had headaches, 10% felt pain on the breasts, 36% on abdomen region, 33% on the lumbar region and 7% felt pain on the legs, as it is shown in table 1.

Places of pain	n	%
Head	8	14
Breasts	6	10
Abdomen	21	36
Lumbar region	19	33
Legs	4	7

Related to the other symptoms, 17% felt dizzy after the first day of the menstrual period, 11% got pale, 8% had nausea, 3% vomited, 31% didn't have any symptoms and 31% reported they felt other symptoms as it is shown in table 2.

Table 2 – Other symptoms felt during the menstrual period.

Places of pain	n	%
Nauseas	3	8
Vomit	1	3
Paleness	4	11
Dizziness	6	17
Others	11	31
None	11	31

The interviewees were asked about the use of tobacco and the practice of physical exercises, and 93% of the interviewees didn't smoke and only 16% of them played some kind of sports and 83% didn't do any physical activity.

In relation to daily activities, 63% of the interviewees had to interrupt some activities due to strong pain related to their menstrual period, as it is shown in table 3.

Table 3 – Number and percentage of the interviewees who needed to interrupt some activities due to pain related to menstrual period.

Interrupted or not some activities due to pain	n	%
Yes	19	63
No	11	37

## DISCUSSION

As it can be seen, 87% of the interviewees present cases of menstrual cramps in the family, confirming that dysmenorrhea is the main gynecological complaint among teenagers and Halbe (2000) refers that 50% of women suffer from some symptoms that cause discomfort in the menstrual period, and Bortoletto (1995) reports that half of the young women report they have menstrual pains on the first days of their periods, in a serious and disabling way, as cited by Longo (2005) that between 6 and 23% of teenagers have severe dysmenorrhea, which was also observed in the result of the research.

In relation to the regions of pain, 14% reported headaches during the menstrual period. The literature reports 61 to 86%, but about the severe dysmenorrhea, which was not the case of the research. According to Raskin (1991) headaches are attributed to the disturb of the serotonergic transmission, with decrease in the levels of tryptamine 5-OH in the platelet in the beginning of the clinical state. The estrogen would stimulate the production of adrenoceptor in the vasculature, blocking the reuptake of serotonin, inhibiting the degradation enzyme of monoamin oxidase, causing vasodilatation on the brain arteries, by releasing the vasoactive peptides. (DIGRE and DAMASIO, 1987).

Mastalgia or breast pain was another related symptom which had 10% of incidence in the research, not a very elevated number. Mastalgia is a discomfort which is well reported in the research due to pain inconvenience and because it is the cause for damages in love relationships and also because of the fear of its relation to neoplasia. (NOGUEIRA and SILVA, 2000).

According to Halbreich et al (1985), mastalgia has been attributed to altered levels of prolactin. Its secretion seems to be dependent on the slowing of neurotransmitter of dopamine and the hyperprolactinemia would indicate reduction in its activity, which is related to the development of depression. (ALILA, ROGO and GOMBE, 1987).

Abdominal pain was present in 36% of the interviewees, similar to other research which reached 54% and according to the same research, the pain can derive from the difficulty the patients have to differentiate dysmenorrhea cases or be the manifestation of pelvic congestive process, intestinal constipation or autonomic disturbs, related to the increase of progesterone, to the action of prostaglandin or vasopressin, which could also be the reason for lumbar pain that in this research had an incidence of 33%, very similar to what was reported in Nogueira and Silva's research (2002), whose result was 36%.

7% of the interviewees related leg pain. The rates of pre menstrual oedema reported in the literature reached 92%, being attributed to hydric retention, by progesterone action causing flaccidity on the venous wall, harming the drainage and also because it acts as agonist of aldosterone inducing natriuresis, immediately compensated by the increase of rennin or conversion to deoxycorticosterone (AUGUSTO and URBANETZ, 1985). Recently some studies have shown evidence of redistribution of liquid and not retention (TOLLAN et al. 1993).

69% of the interviewees reported they had other symptoms like nauseas, vomit, dizziness, paleness and other symptoms not mentioned, while 31% reported they didn't have any other symptoms, which includes the interviewees who don't have menstrual cramps. According to Lima and Baracat (1995), besides the painful state on the abdominal region, lumbar sacral region and breasts, it is also common to show symptoms like nauseas, sweatiness, tachycardia, diarrhea, vomit, nervousness among others.

In relation to the practice of physical exercises and the use of tobacco, 93% of the interviewees don't smoke, and as far as physical activities are concerned, only 16% of them practiced some kind of activity such as stretching, walking, or gym. Most interviewees don't relate the use of tobacco to menstrual pain, maybe because only a small part of them smoke. However, research has shown that smoking increases the chances of developing dismenorrhea symptoms, because smoking alters the hormone levels that are altered due to menstruation, besides, women who smoke have a shorter and more irregular menstrual cycle, according to Johnson (2008).

According to Ana Ferrão (2004), the practice of physical exercises can help decrease of the pain, due to the releasing of endorphin, which is a natural painkiller produced by the body, preventing menstrual pain.

For the treatment of dysmenorrhea, two therapeutic forms can be used; the medicative and the physiotherapeutic one. Medicative ones use AINES and it is a way for initial treatment, derived from prostaglandins and the leucotriene makes part of the genesis of the symptoms. When the body doesn't respond to AINES during 3 consecutive menstrual periods, the use of oral contraceptive pills (OCPs – Oral Contraceptive pills) is indicated, and if this doesn't work during 3 menstrual periods, an evaluation will show whether it is a possible secondary dysmenorrhea (HAREL and ANN, 2008). The use of AINES contains some counter indications: cardiovascular disturbs, brain vascular disturbs, thrombio venous family history, hepatic disease and pregnancy.

For women who refuse the hormone therapy, there is some evidence of benefits with local warmth, with medicinal plants such as toki-shakuyaku-san (Japanese), thiamine, vitamin E, supplements derived from fish oil (Omega-3); low fat vegetarian diet and acupressure (FRENCH 2005).

As physiotherapeutic treatment, the use of transcutaneous electro stimulation brings a good result. According to Hübbe's research, TENS promoted total relief of pain in 80% of the patients and in 20% of them it promoted partial relief, concluding that TENS promotes pain relief in 100% of patients who underwent the treatment.

In addition to the treatment with electrical current, it is suggested the massage of the conjunctive tissue and the manual therapy as the form of treatment for cases of dysmenorrhea. In a research, Reis (2005) obtained pain relief in 89% of the women who participated in the research, through the conjunctive tissue massage, obtaining a positive result with this technique. Besides the massage technique, there are other manual therapy techniques such as cervical traction, vertebra manipulation, hinge manipulation, thorax lumbar manipulation, sacral and iliac correction through their manipulation and womb manipulation, as it is suggested by Longo (2005).

The use of non medicative treatment techniques is indicated because of the effects they cause, which affect 40% of women that report their use (HÜBBE).

Due to excessive pain seen in the result of the research, 63% of the interviewees had to interrupt some daily activities, confirming what was said by Halbe (2000), who reports that the pain happens several days before the menstrual period or some hours before the vaginal bleeding, disabling them to perform their daily activities.

With these data, it can be concluded that dysmenorrhea is a disease that affects women in general, and that influences the daily life of these women, because of its inconvenient symptoms. Because of this, it is necessary a more efficient treatment for the relief of pain, on top of the treatments mentioned above, which brought data showing pain relief in their techniques and in the symptoms dysmenorrhea causes, and for that it is suggested to have more research searching a better treatment which fits into this public and that is more efficient.

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#### DYSMENORRHEA INCIDENCE IN ACADEMIC FEMALE STUDENTS OF A COLLEGE IN CASCAVEL – PR ABSTRACT

Dysmenorrhea, which means difficult or uncomfortable menstruation, affects more than 50% of women. Besides the pain, several symptoms follow it, such as vomit, nauseas, headaches, mastalgia, among others. This disturb is related to the growth in the production of prostaglandin on the first days of the menstrual period. These symptoms disable women to perform their daily activities. This research consists of an epidemiological study and aimed the female students of the physiotherapy course of a college in Cascavel – PR. An interview-like questionnaire, containing 19 questions related to dysmenorrhea was applied to the participants. In the results of the research, 87% reported incidence of dysmenorrhea in the family, 39% were

between 6 and 8 in a scale of 0 to 10, 33% had an increase of pain along the time. The main points of pain reported in the research were on the abdominal region with 36% and on the lumbar region 36%, as for the practice of physical exercises, 83% of the interviewees didn't practice any kind of exercise and 93% didn't make use of tobacco. As for the daily living activities, 63% of the interviewees had to interrupt some activities due to pain related to menstruation. Compared to the literature, the incidence of dysmenorrhea cases were elevated and its discomfort hinders women, most of the time, to have a normal daily life, forcing them to interrupt their daily activities. Several forms of physiotherapeutic treatment are indicated and are efficient, but, it is suggested a higher number of research related to the treatment of this disturb, because it is very common and aggravating among women.

**KEY-WORDS:** Dysmenorrhea, pain, physiotherapeutic treatment, woman.

### **INCIDENCE DE LA DYSMÉNORRHÉE CHEZ LES ÉTUDIANTES D'UNE UNIVERSITÉ DE CASCAVEL-PR**

#### **RÉSUMÉ**

Dysménorrhée, qui signifie une menstruation difficile ou inconfortable, affecte plus de 50% des femmes. Outre la douleur, les divers symptômes d'accompagnement tels que vomissements, nausées, céphalées, douleurs mammaires et autres sont communs. Cette anomalie est liée à une production accrue de prostaglandines les premiers jours de la menstruation. Ces symptômes affaiblissent la femme, le lui compliquant la vie pour mener à bien ses activités quotidiennes. L'étude épidémiologique et les répondants étaient des étudiantes d'un cours de physiothérapie d'une université de Cascavel-PR. Ces jeunes filles qui ont accepté de participer à l'enquête ont reçu un questionnaire sous forme d'interview contenant 19 questions liées à la dysménorrhée.

Les résultats de l'enquête montrent que, 87% ont déclaré une incidence de la dysménorrhée dans la famille, 39% ont donné un score compris entre 6 et 8 sur une échelle de 0 à 10, 33% que la douleur avait augmenté au fil du temps. Les principaux points de la douleur rapportée dans l'enquête étaient de 36% abdominale et lombaire 36%, sur la pratique d'exercices physiques 83% des répondants n'ont exercé aucun et 93% ne fument pas. À l'égard des activités de la vie quotidienne, 63% des étudiantes ont dû cesser toute activité en raison de douleurs liées à la menstruation. La comparaison avec publications ont démontré une augmentation de l'incidence de cas de la dysménorrhée dans la population et la sensation de malaise empêche que les femmes font la vie quotidienne normale, les obligeant ainsi à interrompre leurs activités quotidiennes. Diverses formes de traitement de physiothérapie sont indiquées et se sont montrées efficace, mais elle suggère un plus grand nombre d'études liées au traitement de cette anomalie, étant qu'il est si commun de s'aggraver pendant la durée de vie de la population féminine.

**MOTS-CLÉS:** dysménorrhée, douleur, physiothérapie, femme.

### **LA INCIDENCIA DE LA DISMENORREA EN UNA ESCUELA ACADÉMICA PRIVADA CASCAVEL-PR-BRASIL**

#### **RESUMO**

La dismenorrea, lo que significa la menstruación difícil o incómodo afecta a más del 50% de las mujeres. Además del dolor, los diversos síntomas que acompañan, tales como vómitos, náuseas, dolor de cabeza, sensibilidad en los senos y otros. Este trastorno se relaciona con una mayor producción de prostaglandinas en los primeros días de la menstruación.

Estos síntomas puede debilitar a las mujeres que conduce a las dificultades para llevar a cabo sus actividades diarias. Esta investigación es un estudio epidemiológico y el público objetivo eran académicos curso de fisioterapia de una universidad privada en Cascavel-PR-BRASIL

Para aquellos que aceptaron participar en el estudio recibieron un cuestionario en forma de entrevista con 19 preguntas relacionadas con la dismenorrea. Los resultados de la encuesta, el 87% informó de la incidencia de la dismenorrea en la familia, el 39% le dio una puntuación de entre 6 y 8 en una escala (EVA) de 0 a 10, 33% había aumentado el dolor con el tiempo. Los principales puntos de dolor informado en la encuesta fueron 36% con abdominal y lumbar de 36%, como el ejercicio físico 83% de los encuestados no hacer ningún ejercicio y el 93% no consumo de tabaco. Como la actividad de la vida diaria, el 63% de los académicos que dejar alguna actividad debido a un dolor relacionado con la menstruación. En comparación con la literatura, la incidencia de la dismenorrea se muestra en lo alto de la población, y su incómodo impiden a las mujeres a menudo tienen una vida diaria normal, lo que obligó a detener sus actividades diarias. Diversas formas de tratamiento terapéutico está indicada y demostró ser eficaz, pero se sugiere que un mayor número de obras relacionadas con el tratamiento de este trastorno, aunque es tan común a agravar la vida de la población femenina.

**PALABRAS CLAVE:** dismenorrea, dolor, terapia física, mujer.

### **INCIDÊNCIA DE DISMENORRÉIA EM ACADÊMICA DE UMA FACULDADE EM CASCAVEL-PR**

#### **RESUMO**

A dismenorréia, que significa menstruação difícil ou desconfortável afeta mais de 50% das mulheres. Além da dor, vários sintomas à acompanha, como vômito, náuseas, cefaléia, mastalgia entre outros. Esse distúrbio está relacionado ao crescimento da produção de prostaglandinas nos primeiros dias da menstruação. Esses sintomas debilitam a mulher levando-a a dificuldades para realizar suas atividades diárias. Essa pesquisa constitui em estudo epidemiológico e teve com público alvo acadêmicas do curso de fisioterapia de uma faculdade de Cascavel-PR. Para as que concordaram participar da pesquisa foi aplicado um questionário em forma de entrevista contendo 19 questões relacionadas à dismenorréia. Nos resultados da pesquisa, 87% relataram incidência de dismenorréia na família, 39% deram nota entre 6 e 8 em uma escala de 0 a 10, 33% teve aumento da dor com o passar do tempo. Os principais pontos de dor relatado na pesquisa foram abdominal com 36% e lombar 36%, quanto à prática de exercícios físicos 83% das entrevistadas não faziam nenhum tipo de exercício e 93% não faziam uso de tabaco. Quanto as atividade de vida diária, 63% das acadêmica tiveram que interromper alguma atividade devido a dores relacionadas à menstruação. Comparando com a literatura, a incidência de casos de dismenorréia demonstra-se elevada na população, e seus incômodos impedem que as mulheres, na maioria das vezes tenham uma vida diária normal, forçando-as a parar com suas atividade diárias. Várias formas de tratamento fisioterapêuticos são indicadas e demonstram-se eficazes, mas, sugere-se um número maior de trabalhos relacionados ao tratamento deste distúrbio, sendo que o mesmo é tão comum a agravante na vida da população feminina.

**PALAVRAS-CHAVE:** Dismenorréia, dor, tratamento fisioterapêutico, mulher.

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