

Pain location during early active labor stage*

Localização da dor no início da fase ativa do trabalho de parto

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ABSTRACT

BACKGROUND AND OBJECTIVES: Pain, which is an individual and multifactorial sensation associated or not to tissue injury, may be influenced by psychological, biological, socio-cultural and economic factors. There are scales and questionnaires which enable its location and measurement during labor. This study aimed at identifying the most frequent pain location during early active labor stage.

METHODS: Clinical trial assessing 87 primiparous women with gestational age above 37 weeks, cervical dilatation between 4 and 5 cm, with adequate uterine dynamics for this labor stage. Participated in this study pregnant woman with spontaneous labor, not using drugs during this period and without associated risk factors; pain was evaluated with the body diagram for location and spatial distribution of pain during one labor stage.

RESULTS: It was observed during early active labor stage that most patients have reported pain in the infra-pubic and lumbar region (78%), followed by infra-pubic (20%) or lumbar (2%) region alone.

CONCLUSION: Pain during active labor stage with cervical dilatation from 4 to 5 cm was predominant in infra-pubic and lumbar regions.

Keywords: Pain evaluation, Pain location, Physical therapy.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Dor, sensação individual e multifatorial associada ou não à lesão tecidual, pode se influenciar por fatores psicológicos, biológicos, socioculturais e econômicos. Existem escalas e questionários que tornam possível localizá-la e mensurá-la, durante o trabalho de

parto. O objetivo deste estudo foi identificar a região mais frequente da dor nas mulheres no início da fase ativa do trabalho de parto.

MÉTODOS: Ensaio clínico que analisou de 87 primigestas com idade gestacional superior a 37 semanas, dilatação cervical entre 4 e 5 cm com dinâmica uterina adequada para esta fase do trabalho de parto. Foram incluídas gestantes com trabalho de parto de início espontâneo, que não utilizaram fármacos durante este período e sem fatores de risco associado; para avaliar a dor, utilizou-se o diagrama corporal de localização e distribuição espacial da dor durante uma fase do trabalho de parto.

RESULTADOS: Observou-se que, no início da fase ativa do trabalho de parto, a maior parte das pacientes relatou dor na região infrapúbica e lombar (78%) e a menor parte, apenas na região infrapúbica (20%) ou na região lombar (2%).

CONCLUSÃO: A incidência da dor na fase ativa do trabalho de parto com dilatação cervical de 4 a 5 cm foi maior nas regiões infrapúbica e lombar.

Descritores: Avaliação da dor, Local de dor, Fisioterapia.

INTRODUCTION

Labor is a physiological and natural, however painful process¹. Pain during labor increases catecholamine and cortisol secretion and results in physiological responses, such increased cardiac output, blood pressure and peripheral vascular resistance, so its relief is recognized as a pillar of delivery humanization²⁻⁴.

To evaluate pain location during labor and measure it, scales and questionnaires were developed to enable its quantification and qualification by specialized professionals.

The Body Diagram for Location and Spatial Distribution of Pain is a multidimensional tool to measure, in a simple way, not only intensity but also type of pain by a symbol developed by Ransford. Patient marks the painful area in the anterior and posterior human body schematic representation⁵. Physical therapy during labor aims at helping the evolution of cervical dilatation and fetal descent, promoting continuous support, and at relieving parturients' pain through its numerous therapeutic resources such as transcutaneous electrical nerve stimulation, Swiss ball, massage therapy, immersion and shower bath, respiratory exercises, changes in position, walking, relaxation, maternal mobility, benches and continuous support, among others^{6,7}.

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Parturients' pain location is justified to indicate physical therapy resources which may provide pain relief. These easy to apply and low cost resources may contribute for less use of drugs because they favor higher tolerance to pain, promoting comfort and psychological support to parturients⁶. This study aimed at identifying parturients' pain location in early labor stage by the Body Diagram for Location and Spatial Distribution of Pain.

METHODS

Clinical trial with 87 literate parturients, without cognitive or psychiatric problems, with gestations without intercurrents, primiparous at term, single fetus in cephalad position, spontaneous labor, cervical dilatation between 4 and 5 cm with adequate uterine dynamics for the stage, who have not used drugs during the study period, with intact membranes, who agreed to participate in the research.

Patients admitted to the maternity and meeting the criteria for the study were interviewed by the physical therapist who informed them about the research and, after agreeing to participate, they signed the Free and Informed Consent Term (FICT). Then, they were evaluated by the physical therapist once during active labor stage, that is, in a single moment with cervical dilatation between 4 and 5 cm, using the body diagram for location and spatial distribution of pain.

This research was carried out in the Reference Center of Woman's Health, Ribeirão Preto-MATER, from January to December 2011.

Excel was used for statistical analysis and results were presented as table and figure with mean and percentage.

This study was approved by the Ethics and Research Committee, School of Medicine, Ribeirão Preto-USP, protocol 4262/2009.

RESULTS

Patients' mean age was 25 ± 9 years. Education was 66.7% with complete or incomplete high school, 31% with complete or incomplete basic education and 2.3% with complete college (Table 1).

During early active labor stage, 78% of patients have reported infrapubic and low back pain, 20% in the infrapubic region and 2% in lumbar region, with significant difference among sites ($p < 0.01$) (Figure 1).

Table 1 – Education of studied parturients.

	n	%
Complete or incomplete basic education	27	31
Complete or incomplete high school	58	66,7
Complete college	2	2,3
Total	87	100

n = number of patients.

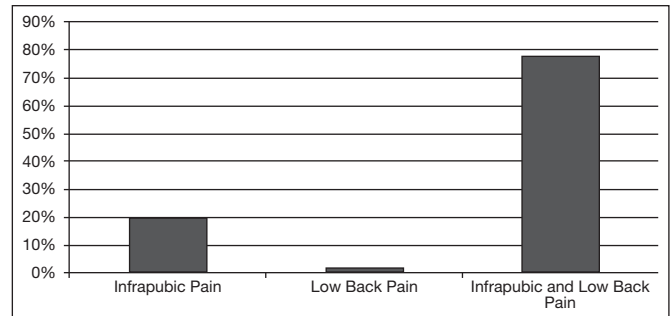


Figure 1 – Pain location by body diagram.

DISCUSSION

Parturients' age should not be considered as an isolated determining factor for maternal and fetal complications. There are few papers correlating age and labor pain, thus making difficult the comparison with our study results.

Pain, major complaint referred by parturients during labor may be associated to emotional, socio-cultural, biological and economic factors. For a good development of labor, patients' physical and emotional wellbeing is necessary to decrease risks and complications. The respect to the right of privacy, safety and comfort, the humanized and quality assistance, added to family support during parturition, make birth a unique and special moment⁸⁻¹⁰.

Pain during labor may be visceral or somatic, because it involves the uterus and the distention of pelvic floor, respectively. During cervical dilatation, visceral pain is characterized for being poorly located, diffuse and generating discomfort, while in the fetal descent stage, second labor stage, somatic pain is severe, clear, continuous and superficial¹¹.

Pain is progressive during labor and advances with the progress of dilatation and uterine contractions intensity. Pain during first labor stage is primarily located in the lower portion of the abdomen and irradiates to the lumbar region and thighs^{4,12}.

To locate pain, a body diagram was developed, which is a pain measurement tool which gives information about location and spatial distribution of patients' pain⁵. By a schematic representation of the human body in anterior and posterior views, several authors have studied the prevalence of painful regions during labor^{8,13,14}. To identify the body region with higher uterine contractions perception during labor and delivery, we carried out a study with 40 primiparous parturients in early active labor stage. Most frequent pain site was the pubic region, followed by sacral region, present only during uterine contractions, both for those using misoprostol and evolving to spontaneous labor¹⁴.

Our results are in line with the literature. Selected parturients were in early active labor stage and had pain especially in infrapubic and lumbar regions. More studies are needed with better methodology, to relate labor dilatation stage to pain location, so that the best resource to relief parturients' pain may be selected.

CONCLUSION

Our study has observed that pain during active labor stage with cervical dilatation from 4 to 5 cm was more severe in infrapubic and lumbar regions.

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