The Nature of Maternal Postnatal Pain

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Abstract

This study identifies the location and intensity of pain in a sample of 75 women during the first 4 days postpartum. The emphasis on normal processes and shortened hospital stays may decrease attention to maternal postnatal pain. Individual women's variations of pain in both location and intensity from day to day suggest that the reality of postnatal pain needs to become a more important aspect of perinatal education and postnatal care.

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Maternal postnatal body pain emerged as a serendipitous finding in a multi-site study of parental postnatal needs (Stainton, Murphy, Higgins, Neff, Nyberg & Stenholm, 1996).¹ Women and their partners believed that the last labor contraction was the end of pain associated with giving birth. Thus, continuing discomfort or pain in the postnatal body was unexpected for most women and of concern to their partners.

This article reports the findings of a study that further examines the nature of pain experienced by women in the first 4 postnatal days. The findings provide evidence that more attention to both the assessment of postnatal pain and the provision of comfort is needed. Perinatal education programs also need to present realistic expectations of pain as the maternal body recovers from pregnancy and giving birth.

¹Sites were 2 in Canada, 2 in the United States of America, 1 in Australia, and 1 in Sweden, with a total of 117 sets of parents (n = 234).

There are few references specific to maternal postnatal pain. Nipple pain has been studied systematically (Zeimer & Pigeon, 1993; Hill & Humenick, 1993; Heads & Higgins, 1995). Incisional pain from episiotomy or Caesarean birth is expected but is often under-rated in practice (Wright, 1994). Descriptors of pregnancy and giving birth as “normal” processes have resurfaced in the new economic climate of health care delivery and are used as support for short hospital stays. Women experience a shift in the focus of caregivers and family from the pregnant woman to the infant after birth (Stainton, 1989). Within this context, the normal discomforts and possibility of pain following labor and delivery may not be adequately acknowledged (Stainton, et al., 1996).

Method

A repeated measures design was used to collect information about maternal postnatal pain. The study was conducted on two postnatal wards and in the birth center of a large tertiary metropolitan women’s hospital. It was a self-reporting survey based on the fundamental tenet of pain as a personal experience that exists as the woman describes it (Jiménez, 1998).

Sample. The convenience sample was 75 postnatal women who had delivered a live infant, could read English, and consented to fill out a questionnaire daily for 4 days. The group included 23 women who had an intact perineum, 24 women with a perineal tear, 17 women who had an episiotomy, and 11 women who had a Caesarean delivery. This sample includes a representative range of potential sources of pain for postnatal women. The resulting data are descriptive and are not intended to quantitatively compare sources of pain for groups of new mothers or influences such as parity, environment, or type of birth. Thus, detailed demographic information is not reported here.

Data Collection. The *Maternal Pain Questionnaire* (MPQ) was designed so that women could rate the location, intensity, frequency, and treatment of pain for each of the first 4 postnatal days. (See Figure 1.) Six practising postnatal midwives reviewed the questionnaire for clarity and content validity. The MPQ provided space for women to circle a number between 0 and 10 (“None”

to “Excruciating”) to describe the intensity of their pain in each of 16 locations. The MPQ for each of 4 days and an information sheet were given to each consenting woman during admission to the postnatal unit. These were completed at home by those on early discharge. Midwives encouraged participants to fill in the forms each day. They were also available to help the participants in understanding terms but did not assist with rating. A stamped, self-addressed envelope was given to women discharged prior to the fourth day so they could return their forms. The Domicillary Midwifery Services and the Outpatient units were appraised of the study and given forms to augment the mother’s supply at home should it get lost or spoiled. As forms were returned and data entered into Excel spread sheets, codes were assigned to each woman’s set of MPQs, and names and other identifying information were removed.²

Data Analysis. The goal of analysis was to identify the main locations of pain, the intensity in each site for each day, and changes over the 4 days. To facilitate analysis, scores were coded into four categories (1–2 = Mild, 3–5 = Discomfort, 6–9 = Severe, and 10 = Excruciating). Daily total intensity scores were calculated for each woman.

Findings

The findings show that there is considerable variation in the location and intensity of women’s postnatal pain during the first 4 postnatal days. Each woman’s location and intensity of postnatal pain varied from day to day and from other individuals in the sample.

Location of Pain. The major sites of pain and the changes in dominant sites each day for the total sample are evident in Figure 2. Perineum/vaginal pain was experienced by all women, including those with an intact perineum that one woman described as “still stinging!” The majority experienced afterpains, especially when breastfeeding. Painful urination and pain in the epidural site were the second most common areas of pain or

²If all women in the study had reported pain averaging 3.49–4.38 (“Discomfort”), the possible high score would be 295. The potential highest score if all women had reported “Excruciating” pain at one site is 750.

CODE: _____ MATERNAL PAIN QUESTIONNAIRE Date: _____ Time: _____
 HOME DATE OF TIME OF BABY'S
 PHONE NO: _____ DELIVERY: _____ DELIVERY: _____ BIRTHWEIGHT _____ BABY'S
 NAME _____

CIRCLE THE INTERVENTIONS THAT APPLY TO YOUR LABOUR & DELIVERY:

Pethidine Gas Epidural Tear Episiotomy/Cut Stitches Ventouse Forceps Caesarean
 Injection

LOCATION OF PAIN (Circle site)	INTENSITY OF PAIN (Circle a number) 0=None 3=Discomfort 6=Severe 10=Excruiating	FREQUENCY OF PAIN (Circle a phrase)			TREATMENT FOR PAIN RELIEF e.g. salt baths, ice, medication (please complete)
		All the time	When moving	Once only	
Perineum/Vaginal area	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Breast - left	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
- right	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Nipple - left	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
- right	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Abdomen - afterpains	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Abdomen - incision	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Legs	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Back/Epidural site	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Shoulder	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Arms	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Neck	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Headache	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Jaw	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
When passing urine	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Hemorrhoids	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	
Other: Where?	0----1----2----3----4----5----6----7----8----9----10	All the time	When moving	Once only	

Figure 1 Maternal Pain Questionnaire (MPQ) Day One

The form has been scaled down for ease of reproduction in this report. In use the form was a double sided A3 folded in half and then thirds (pamphlet size) with the four days of the study marked as 1-4. Descriptive words relating to the delivery were only included on the Day One side of the MPQ.

discomfort on Day 1. By Day 2, nipples and breasts were becoming more dominant as the major locations of pain.

All women reported pain in at least one location on Day 1. Five women reported pain in only one location (range of severity = 3–7), and one woman reported 11 locations of pain. On Day 2, one woman reported no pain; however, on Day 3, she reported pain in several locations. Pain in the jaw was the least common location of postnatal pain.

Intensity of Pain. The variability in the total intensity scores for each of the 75 women on each of the 4 days is perhaps the most important finding. (See Figures 3–6.) These line graphs show that each woman had her own pattern of postnatal pain that may have increased or decreased in her unique combination of painful sites over the first 4 days. As shown in Figure 2, while the intensity on some sites may have decreased for the overall sample, this may not necessarily have been the case for all individuals.

When the intensity scores were totalled for each of several sites, the accrued pain intensity in a woman's

body reached a mean that fell into the "Severe" category. The range of intensity also varied from "Mild" to "Excruciating" across several sites for some women.

The sum of pain intensity scores in various sites increased for approximately 50% of the women on Day 2. For others, the pain intensity increased through to Day 4. (See Figure 6.) One woman described her experience on Day 4 as "generally feeling worse all over today—aching."

There was an increase in the sample's total intensity of breast (19→159) and nipple (55→185) pain scores from Day 1 to Day 4, with the largest increase between Day 1 and Day 2 (55→144). Approximately 50% of women added "when breastfeeding" to the frequency section of the MPQ on Days 2 and 3, with 25% making that association on Day 4. On Day 2, one woman wrote, "nipple pain and blisters very distressing . . . put perineum pain in perspective. Nipple pain more distressing because you assume you have done something wrong and you don't know how to 1) do it right and 2) repair the damage. Conflicting advice RE attachment (latching) adds to distress." On Day 3, this same woman wrote, "pain in nipple when not feeding is distressing. Don't

Figure 2 Location & Intensity of Postnatal Pain Days 1–4 for Total Sample

Figure 3 Individual Intensity Scores Day 1

Figure 4 Individual Intensity Scores Day 2

Figure 5 Individual Intensity Scores Day 3

Figure 6 Individual Intensity Scores Day 4

know why it is there.” It is clear that nipple and breast pain is very upsetting.

The total score for all women in the perineal/vaginal site reduced by 50% from Day 1 to Day 4, as did the total score for abdominal afterpains (245→92). Of interest is the fact that back/epidural pain showed little overall change in total intensity for the sample over the 4 days (113→122→108→110).

Total intensity scores for pain when urinating decreased from 140→67 over the 4 days. A woman whose intensity scores for both back/epidural and perineum/vaginal pain sites dropped from 6 (“Severe”) on Day 1 to 3 (“Discomfort”) on Day 4 wrote on the fourth day, “I had no idea a simple task of sitting down could be so painful. I’m hoping the pain will go so I can resume normal activities like walking!” Her self-rating of pain decreased; however, her language implied a continued painful experience.

Daily Pain Experience

Figure 7 shows the daily pattern of women with pain in the 16 sites. The considerable variation between days and sites is clear.

Day 1. Seventy-seven percent of women ($n = 58$) indicated they experienced abdominal afterpains rated as “Mild” ($n = 12$), “Discomfort” ($n = 36$), and “Severe” ($n = 10$) to “Excruciating” ($n = 2$) on Day One. Eighty percent of women ($n = 60$) indicated they had some perineal/vaginal pain ranging from “Mild” ($n = 5$), “Discomfort” ($n = 37$), “Severe” ($n = 16$), and “Excruciating” ($n = 1$). The average mean intensity score for perineal/vaginal pain on Day 1 was 4.3 (range 1–8) and for abdominal afterpains was 4.0 (range 1–10). While both means reflect an intensity rating of “Discomfort,” the range within the sample was from “None” to “Excruciating.” Severe pain was reported by women in seven other sites on Day 1— each nipple ($n = 1$), backpain ($n = 5$), neck ($n = 1$), head ($n = 1$), pain from haemorrhoids ($n = 6$), and other ($n = 3$). Three women reported severe pain in more than one site on Day 1. Other areas of pain experienced on Day 1 are shown in Figure 2. The average mean intensity score for pain on Day 1 did not differ for those women who had a Caesarean (3.49) and those who had an episiotomy (4.38). Women with an intact perineum or Caesarean had total daily intensity scores ranging from 3–44, while for women in the other two groups (episiotomy, perineal tear), the range was

Figure 7 Daily Pain Pattern by Site

2–34. Of the two women who had the highest total scores of 44, one had no interventions during the birth process. She had pain ranging from “Discomfort” to “Severe” (3–6) in 11 sites. The other woman had a Caesarean delivery after a long labor and had an intensity range from “Mild” to “Excruciating” (2–10) in seven sites.

Day 2. Figure 7 shows an overall reduction in the pain intensity scores for the perineum/vaginal site and from abdominal/afterpains on Day 2. Only one woman reported “Excruciating” pain, continuing her Day-1 pattern. As can be noted from Figure 7, women’s individual experience of pain changed over the 2 days. One woman, whose total intensity score on Day 1 was 36, had a Day-2 total intensity score of 49 from pain in nine sites, with six of those sites scored as “Severe” (range 6–8). Interestingly, this woman had an epidural but did not tear or have an episiotomy.

The most common sites for “Severe” pain on Day 2 were the perineal/vaginal area ($n = 9$) and the left nipple ($n = 9$). Pain in the right nipple was “Severe” for six of the nine women who reported left nipple pain as also “Severe.” What stands out on Day 2 is the increase in nipple pain and breast pain in this sample of postnatal women. The number of women who experienced severe pain in any site increased on Day 2 with an associated increase in the number of locations. Beside “Other,” one woman wrote, “Tailbone” and continued, “very sore today, can barely walk, rolling over is very painful. Basically can’t sit up. Muscles in this area very sore.”

Day 3. The individual intensity of the pain experience continued on Day 3 with a maximum individual total intensity score of 52 across 14 sites for one woman (no. 33). This woman experienced pain throughout her whole body. While her average pain intensity reflects “Discomfort” (3.71), she recorded an intensity of 6 (“Severe”) in two sites (perineal/vaginal and when urinating). The back and epidural sites continued to be locations of pain for many of the women. While overall the total intensity score on Day 3 for pain when urinating had dropped for the total sample from 140 to 91, 34 women rated their painful urination and perineal/vaginal pain as the same as Day 2. Fifty-five women had a reduced total intensity score reflecting the start of perineal/vaginal recovery and a decreased intensity of abdominal

afterpains. Severe pain in one or more sites was still being reported by 32% ($n = 24$) of the women. By Day 3, nipple pain equalled perineal/vaginal pain. Twenty-four women reported severe pain (range 6–9). The most common sites were perineal/vaginal ($n = 6$), both breasts ($n = 6$), both nipples ($n = 8$), and haemorrhoids ($n = 5$). Abdominal afterpains continued to be severe for three women (range 6–9), particularly when they were breastfeeding.

Day 4. Day 4 showed more variation in pain among the women. Nipple and breast pain dominated the Day-4 profile as 13 women rated their left and right nipple pain as “Severe” (range 6–8) or “Excruciating” ($n = 1$). (See Figure 7.) Back/epidural pain was still present with a slight increase in the number of women reporting pain in this area from Day 3 ($n = 30$) to Day 4 ($n = 36$). There was a small increase in the total pain intensity score from 108 to 110 at this site. There was a decrease in the number of women recording perineum/vaginal pain ($n = 55 \rightarrow 46$), with a corresponding decrease in the overall score from 182 to 129. The average mean intensity for pain on Day 4 was 3.25 (range 1–8). The maximum pain intensity score for individual women continued its slight trend up to 54 from a low on Day 1 of 44. One woman with a maximum pain experience on Day 4 reported pain in 12 sites, with severity ranging from “Mild” to “Severe” (1–7). On Day 1, this woman’s score totalled a low of 22 in seven sites. A total of 28 women reported severe pain on Day 4, with another woman reporting excruciating pain in both nipples. Of the 75 women, only four reported no pain on Day 4. This may be due to non-completion of the form as this was often the day of discharge. However, one of these four was the woman with the maximum pain score on Day 3. One of these four women indicated no pain by circling 0 at all sites; the other three forms were blank for this day only.

Frequency

The majority of responses to this area of the MPQ indicated that breast, nipple, and afterpains increased in intensity while breastfeeding. Not surprisingly, perineal/vaginal pain not only intensified for nearly 50% of the women when they moved, but also remained uncomfortable for 1/3 of the sample over the 4 days. Additionally,

moving was the motivator of abdominal afterpains twice as often as breastfeeding. By Day 3, nipple pain was continuous for 25% of the sample and increased when breastfeeding for another 25% of the women.

Treatments

On the MPQ, the women noted a variety of treatments for their pain. It is clear from looking at this data that no systematic pain management is evident. Analgesia was used by less than 1/3 of the sample for perineal/vaginal pain, breast, and nipple pain for each of the 4 days. The most analgesia was used on Day 2 for perineal/vaginal pain ($n = 18$) and afterpains ($n = 17$) and was still used for perineal pain by 12 women on Day 4. Other treatments included ice, salt, and warm baths for perineal pain. For breast pain, a few women ($n = 3-6$) used cabbage leaves, ice, warm showers, exposure to air, massage, or manual expression. This study did not include testing of these practices but did reveal a variability and inconsistency in the practice of providing comfort.

Discussion

While pain in one or more locations was common, no one pattern emerged in the pain scores of this sample. The individual variability of location and intensity of postnatal pain renders it unpredictable. While the majority of the scores indicated a pain within the range of "Discomfort," others rated their pain in one or more sites as "Severe" or "Excruciating."

The women indicated their pain increased when they were moving or breastfeeding. However, none indicated they remained in bed or stopped breastfeeding. Maternal pain usually will not change the strong focus of mothers on establishing maternal-infant attachment (Stainton, 1989). Thus, it has been shown that there is a need for effective analgesia for perineal pain to reduce potential effects on maternal-infant interaction (Reading, Sledmore & Cox, 1982).

This study shows the numerous locations and intensity variations of postnatal pain. It is important to further study the impact of the accumulated pain intensity when pain occurs in several sites simultaneously. The insidious effects of pain—such as fatigue, irritability, emotional instability, and social withdrawal—could put extra stress

on the woman and the dynamics of the postnatal family (Stainton, 1989).

High-performance athletes know they will be strained, tired, and painful for some time after a major event. Pregnancy and childbirth, while natural processes, stretch the body and whole being to maximum performance. These processes may engage the mother so that consciousness of discomfort or verbalization of pain may not occur. More acknowledgement is needed of the discomforts and pain experienced while other processes, such as mother-infant attachment and changes in family dynamics, take place. The MPQ designed for this study was useful in eliciting information not otherwise expressed. It was clear and easy to use. Women stated gratitude for "someone knowing" and for the attention the study brought to their discomforts and pain. Midwives on the unit also began to discuss women's responses to pain and to provide a wider range of comfort measures. Recently, massage students have been welcomed onto the units to practise body massage on willing women. Informal feedback indicates this is an excellent experience for both. A systematic study of the outcomes will be forthcoming.

Implications for Practice

There is a continuing need to gather evidence in order to improve practice. This study provides a snapshot of the potential pain being experienced on a postnatal unit. The pain phenomena as reported in this study highlights the importance of offering reassurance and treatment options to the postnatal woman. It also shows the need for close observation of the postnatal woman. The variability shown for individuals, days, and sites suggests a need to ask each woman about postnatal pain regardless of the type of delivery or behavioral cues. Absence of pain behavior does not mean the absence of pain (Jiménez, 1998). Assessment and acknowledgement of the body change; pain and recovery from pregnancy and childbirth do not reduce the naturalness of the process. Highley (1967) described the postnatal process of "biological-physical restructuring" as part of the evolution of maternal identity.

There is a need to dispel the myth that pain associated with childbirth stops after the placenta is expelled. Recognising and assessing a woman's assistance with comfort in her postnatal body need to become parts of

postnatal care. Highley's question of 25 years ago still seems relevant: "If the initial phase [of postnatal] is a need to restructure the self physically and biologically, what opportunities exist for the mothers to express or explore this need?" Postnatal women require help to express pain, particularly if it is at the intensity level of "Discomfort."

Clinical use of the MPQ might serve as a useful tool in postnatal units. It can be used as a self-survey or to provide a guide to specific questions to ask of mothers. Ways of systematically assessing individual postnatal pain can be taught in educational programs for practitioners so that pain management can be more effective. In prenatal education, women and their partners can be prepared for the expectation of some postnatal pain after such high-performance activity. They can also be taught how to acknowledge and ask for comfort measures or analgesia as required.

It is important to discover what causes painful breastfeeding and what alleviates it. Pain during breastfeeding has the potential to negatively affect maternal confidence and competence (Flagler, 1988). Nipple pain in particular has potential implications for the duration of and satisfaction with breastfeeding. The model developed by Heads and Higgins (1995, p.70) provides a useful guide in understanding the consequences of nipple damage. Specialised practitioners, such as midwives and lactation consultants, must continue the search for ways of preventing nipple pain and the possible nipple damage that can occur (Walker & Driscoll, 1989).

Research is needed to find ways to prevent or reduce postnatal pain through non-pharmacological means. Testing interventions to provide a repertoire of predictably helpful practices would improve evidence-based practice. Understanding the cultural aspects of the experience of postnatal pain and its meaning is also needed. Western systems have increasing multicultural childbearing populations in midwifery and maternity nursing practices.

The emphasis on normal processes and shortened hospital stays may mean the postnatal woman is in her

own home and not in an environment in which pain management is an expected part of care. This study shows the importance of including the expectation and possible ways of expressing pain. Partners appreciate assistance in providing comfort (Stainton, et al., 1996). Perinatal education of both practitioners and parents could include systematic ways of assessing and responding to each postpartum woman's cumulative pain intensity and variations in locations for at least the first 4 days postpartum.

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