Antenatal Vulvar Pain Management, Labour Management, and Postpartum Care of Women With Vulvodynia: A Survey of Physicians and Midwives


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Abstract

Objective: To examine maternity providers' recommendations for pregnant women with vulvodynia regarding management of vulvar pain and postpartum care, and to examine if, and how, a woman's chronic vulvar pain affects providers' examination and management during labour.

Methods: This research was part of a larger study that invited physicians and midwives to answer a questionnaire regarding pregnancy and childbirth care in women with vulvodynia. To achieve the current objectives, the questionnaire included both dichotomous (yes or no) and open-ended items. The current sample (n = 116) consisted of 75 physicians and 41 midwives.

Results: Over 60% of the sample reported making recommendations for vulvar pain management during pregnancy, and 32.8% of providers reported making special postpartum care recommendations for women with vulvodynia. Differences between physicians and midwives were noted for some of these recommendations. For example, to manage vulvar pain, only physicians recommended the use of/change in medications ($P < 0.001$) and only midwives recommended complementary medicines ($P = 0.02$) and the use of lubricants ($P = 0.006$) and made recommendations for sexual well-being ($P = 0.02$). The majority of the sample (75%) reported that a woman having vulvodynia affected labour examination and management; providers most frequently reported minimizing exams and early use of epidural. Over 80% of midwives and 54% of physicians minimized exams during labour for women with vulvodynia ($P = 0.01$).

Conclusion: Further research is needed to understand the optimal provision of care for pregnant and postpartum women with vulvodynia. We advocate for increased education of vulvodynia aimed at providers of antenatal, labour, and postnatal care.

Key Words: Vulvodynia, pregnancy, obstetric delivery, obstetrics, physicians, midwifery

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Résumé

Objectif : Examiner les recommandations données par les fournisseurs de soins de maternité aux femmes enceintes atteintes de vulvodynie sur la prise en charge de la douleur vulvaire et les soins postpartum, déterminer si la douleur vulvaire chronique des femmes influence l'évaluation et la prise en charge durant le travail, et évaluer cette influence, le cas échéant.

Méthodologie : Cette étude a été menée dans le cadre d'une étude de plus grande envergure qui consistait à inviter les médecins et les sages-femmes à répondre à un questionnaire sur les soins prodigués aux femmes atteintes de vulvodynie durant la grossesse et l'accouchement. Le questionnaire comprenait des questions fermées (oui ou non) et des questions ouvertes. L'échantillon étudié (n = 116) était formé de 75 médecins et de 41 sages-femmes.

Résultats : Plus de 60 % des répondants ont dit formuler des recommandations sur la prise en charge de la douleur vulvaire durant la grossesse, et 32,8 % ont dit donner aux femmes atteintes de vulvodynie des recommandations particulières sur les soins postpartum. Des différences ont été notées entre les recommandations des médecins et celles des sages-femmes. En ce qui a trait à la prise en charge de la douleur, par exemple, seuls les médecins recommandaient la prise de médicaments ou la modification de la médication ($P < 0,001$), et seules les sages-femmes recommandaient le recours à la médecine parallèle ($P = 0,02$) et aux lubrifiants ($P = 0,006$), et donnaient des recommandations visant à favoriser le bien-être sexuel ($P = 0,02$). La majorité des répondants (75 %) a signalé que la vulvodynie influençait l'évaluation et la prise en charge de la femme durant le travail; les effets les plus fréquemment mentionnés par les fournisseurs étaient la réduction des examens et la mise en place précoce de la péridurale. Plus de 80 % des sages-femmes et 54 % des médecins ont dit limiter les examens effectués chez les femmes atteintes de vulvodynie durant le travail ($P = 0,01$).

Conclusion : D'autres études seront nécessaires pour connaître les soins optimaux à prodiguer aux femmes atteintes de vulvodynie durant la grossesse et la période postpartum. Nous

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recommandons de former davantage les fournisseurs appelés à prodiguer des soins avant, pendant et après la naissance sur la vulvodynie.

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INTRODUCTION

Vulvodynia is a distressing chronic pain condition defined as vulvar pain "without clear identifiable cause."[1] It is estimated that by the age of 40 approximately 7% to 8% of American women will have experienced symptoms of vulvodynia, many of whom have not sought treatment or received a diagnosis (Canadian data not available).[2] The prevalence in women younger than 20 may be even higher, with 20% of sexually active adolescent girls reporting pain with intercourse in a Québec-based study.[3] Provoked vestibulodynia (PVD), the most common type of vulvodynia, involves pain when pressure is applied to the vulvar vestibule (e.g., with intercourse or tampon use) and difficulty with vaginal examinations, and is the most common cause of dyspareunia in reproductive-aged women.[4] The pain, and often associated pelvic and perineal muscle tightening, may interfere with a woman's ability to consummate a relationship and achieve pregnancy. Because anticipated vaginal penetration elicits fear and anxiety, there is often a decline in sexual desire and other components of the sexual response cycle.[5]

Despite the high prevalence of vulvodynia among women of reproductive age, there is limited literature examining pregnancy, labour, and the postpartum period among affected women. Women with vulvodynia are thought to require unique obstetrical care[6,7]; however, research has only recently started to assess providers' care of and recommendations for pregnant women with vulvodynia.[8] Recent studies have found that women with vulvodynia are more likely to experience postpartum pain[9] and that women with PVD and/or vaginismus (i.e., phobic anxiety about vaginal penetration/pain) are more likely to have Caesarean deliveries[10] compared with women without such (anticipated) pain. A qualitative study of 18 pregnant or postpartum women with vulvodynia found that the majority had increased anxiety regarding labour and delivery, and that the women were often dissatisfied with the medical care they received.[11]

The aims of the current study were to examine maternity care providers' recommendations given to pregnant women with vulvodynia, specifically regarding: (1) the management of women's vulvar pain during pregnancy and (2) women's postpartum care. A third aim was to assess if and how a woman's chronic vulvar pain affects providers' examination and management during labour. This research is part of a larger study regarding physicians' and midwives' maternity care of women with vulvodynia.[8]

METHODS

Sample

In total, 186 health care providers responded to a brief questionnaire regarding management of pregnancy and childbirth in women with vulvodynia. We excluded respondents for the following reasons: reported practicing physical therapy (n = 6), complementary therapies (n = 1), or neurology (n = 1); did not indicate current practice specialty (n = 2); or had large amounts of missing data (n = 9). In addition, only respondents who reported current clinical practice and who reported providing ante-, intra-, or postpartum care were administered the pregnancy- and postpartum-related items of interest in this study. The current analyses were also restricted to those respondents who consistently reported seeing both pregnant and non-pregnant women with vulvodynia in their practice. Thus, respondents were excluded from the current analyses if: they reported being retired from all clinical practice (n = 2), on leave (n = 3), or in training (n = 2); they reported that they did not provide ante-, intra-, or postpartum care (n = 20); or they indicated that they did not see women with vulvodynia, including pregnant women with vulvodynia, in their practice (n = 23). Lastly, we excluded one respondent from the current analyses who indicated that he/she had not discussed vulvar pain during antenatal care or encountered a woman with vulvodynia in labour (but who reported seeing pregnant and non-pregnant women with vulvodynia). Our final sample consisted of 116 clinicians (75 physicians; 41 midwives).

Procedure

This research was part of a larger study that examined clinicians' obstetrical care of women with vulvodynia and that targeted physician and midwives who provided ante-, intra-, or postpartum care. The methods for the study have been previously reported.[8]

In brief, recruitment involved the use of listserv notifications, a newsletter submission, distribution of hard copies of the questionnaire and/or posters (e.g., to physician and midwifery offices), and word of mouth. Study respondents were administered an investigator-derived questionnaire that could be completed online or on paper in approximately five minutes or less. The completion of the

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questionnaire indicated consent to participate. Respondents could provide their email address to be eligible for a $10 electronic gift card (for the first 10 respondents only) or to win a prize draw. This study was approved by the Behavioural Research Ethics Board of the University of British Columbia and our associated hospital research ethics board.

Measures

Sample characteristics

Information including age, gender, current medical specialty, size of the town or city population in which they practiced, setting of practice, number of years in clinical practice, frequency of seeing pregnant women with vulvodynia in practice, and comfort (yes or no) managing ante/intra/postpartum care for women with vulvodynia was collected from respondents.

Vulvar pain management during pregnancy

One open-ended item asked respondents: "what recommendations regarding vulvar pain management do you generally provide to women with vulvodynia while they are pregnant?"

Examination and management during labour

Respondents were asked "when a woman with vulvodynia presents in labour, does the fact that she has chronic vulvar pain affect your examination and management during labour?" Response options were "yes" or "no," along with a "not applicable" option for respondents to report if they did not see women with vulvodynia in their practice. Respondents who indicated "yes" to this item were then asked to report how their examination/management during labour is affected.

Postpartum recommendations for women with vulvodynia

The following question with "yes" or "no" response options was administered: "are there any special recommendations regarding postpartum care that you generally provide to women with vulvodynia while they are pregnant?" Respondents who answered "yes" to this item were subsequently asked to indicate what special postpartum care recommendations they generally provide.

Analysis

We mainly conducted descriptive statistics. Differences between physicians and midwives were analyzed using independent samples *t* tests for continuous data or chi-square tests for categorical data. One member of the research team with qualitative research experience read the open-ended responses, developed coding categories, and subsequently coded these responses, after consultation with the lead author. SPSS (IBM Corporation, Armonk, NY) was used for data analysis.

RESULTS

Sample Characteristics

Participant characteristics are presented in Table 1. Physicians were in clinical practice for significantly longer than were midwives ($P = 0.05$). Significantly more midwives were women ($P < 0.001$), practiced out of the patient's home ($P < 0.001$), practiced in a labour and delivery hospital ($P = 0.001$), and did not feel comfortable managing ante/intra/postpartum care for women with vulvodynia ($P = 0.003$). Physicians and midwives reported a similar frequency of seeing pregnant women with vulvodynia in their practice ($P = 0.64$).

Vulvar Pain Management During Pregnancy

The majority (n = 76; 65.5%) of the sample provided a response to the open-ended item regarding vulvar pain management recommendations during pregnancy for women with vulvodynia. However, among the 76 responses to this item, one respondent reported only providing labour care and four respondents indicated that they did not make specific recommendations (e.g., by reporting "none" in response to the question). One of these four respondents provided the following rationale for not making vulvar pain recommendations during pregnancy: "usually women in pregnancy are less sexually active, so provoked vulvodynia is less common. No specific recommendations as they tend to be less sexually active." There was no significant difference in the number of physicians who responded to the vulvar pain management item in comparison to midwives ($P = 0.64$), or in the number of providers who were comfortable versus not managing maternity care for women with vulvodynia ($P = 0.39$).

The remaining 71 respondents (n = 44 physicians; 27 midwives) reported providing a variety of recommendations for vulvar pain management to women with vulvodynia during pregnancy (Table 2). The most frequent response was use of/change in medications, followed in frequency by physiotherapy (including biofeedback) and psychological strategies. Topical anaesthetics were the most frequently recommended medication, and a small number of respondents recommended antidepressants for managing vulvar pain during pregnancy. In general, however, the reported vulvar pain management strategies were recommended by a small percentage of respondents (ranging from 2.8% to 36.6% of the 71 respondents who made such recommendations). Fourteen percent of the 71 respondents reported that their recommendations for vulvar pain management do not

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Table 1. Sample characteristics

Characteristic	Total (n = 116)		Physicians (n = 75)		Midwives (n = 41)	
	N	M ± SD or %	N	M ± SD or %	N	M ± SD or %
Age (years)	115	45.18 ± 10.46	74	46.24 ± 9.26	41	43.27 ± 12.23
Years in practice[a]	115	14.00 ± 10.03	74	15.50 ± 8.82	41	11.29 ± 11.54
Gender[b]						
Female	90	77.6	49	65.3	41	100
Male	26	22.4	26	34.7	0	0
Specialty						
Obstetrics & gynaecology	67	57.8	67	89.3	-	-
Obstetrics	2	1.7	2	2.7	-	-
Family medicine	5	4.3	5	6.7	-	-
Midwifery	41	35.3	-	-	41	100
Other[c]	1	0.9	1	1.3	-	-
Practice location population						
<10 000	9	7.8	4	5.3	5	12.2
<50 000	18	15.5	13	17.3	5	12.2
<100 000	16	13.8	11	14.7	5	12.2
100 000 or greater	72	62.1	47	62.7	25	61.0
Practice setting						
Office	105	90.5	67	89.3	38	92.7
Hospital, excluding L&D	14	12.1	12	16.0	2	4.9
Hospital, including L&D[b]	100	86.2	59	78.7	41	100
Home[b]	35	30.2	1	1.3	34	82.9
Other	2	1.7	2	2.7	0	0
See pregnant women with vulvodynia						
Weekly	3	2.6	3	4.0	0	0
Monthly	20	17.2	15	20.0	5	12.2
Every 3–6 months	19	16.4	12	16.0	7	17.1
Every 6–12 months	29	25.0	15	20.0	14	34.1
Rarely (less than yearly)	45	38.8	30	40.0	15	36.6
Comfortable managing ante/intra/postpartum care for women with vulvodynia[d]						
Yes	88	75.9	63	84.0	25	61.0
No	27	23.3	11	14.7	16	39.0

Note: Percentages may not add up to 100 as a result of missing data or due to ability to indicate more than one response option in any given category (e.g., practice setting).

L&D: Labour and Delivery.

[a]Indicates significant difference between physicians and midwifes, $P = 0.05$.

[b]Indicates significant relationship between provider type (physician or midwife) and specific characteristic, $P \leq 0.001$.

[c]Participant reported specializing in vulvovaginal disorders.

[d]Indicates significant relationship between provider type (physician or midwife) and specific characteristic, $P < 0.01$.

change when a woman with vulvodynia is pregnant. There was a significant relationship found between provider type (physician or midwife) and the following recommendations: use of/change in medications, including topical anaesthetics ($P < 0.001$), use of lubricants (Fisher's exact test, $P = 0.006$), recommendations for sexual well-being (Fisher's exact test, $P = 0.02$), complementary medicine (Fisher's exact test, $P = 0.02$), and making a referral (Fisher's exact test, $P = 0.001$). Only physicians reported recommending the use of medications or changing medications for vulvar pain management during pregnancy. Only midwives in our sample recommended the use of complementary medicines, such as acupuncture and homeopathy. As well, only midwives reported recommending lubricants for vulvar pain management

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Table 2. Recommendations regarding vulvar pain management provided by physicians and midwives to women with vulvodynia during pregnancy

	Total (n = 71)		Physicians (n = 44)		Midwives (n = 27)	
Recommendation	N	%	N	%	N	%
Complementary medicine (e.g., acupuncture, homeopathy, hypnotherapy)[a]	4	5.6	0	0	4	14.8
Discussions with patient	7	9.9	2	4.5	5	18.5
Lifestyle changes (e.g., diet, clothing, hygiene, avoid aggravating factors)	8	11.3	5	11.4	3	11.1
Limit examinations	2	2.8	0	0	2	7.4
Making a referral[b]	9	12.7	1	2.3	8	29.6
Physiotherapy (including biofeedback)[c]	20	28.2	15	34.1	5	18.5
Preparations for labour and birth (e.g., early epidural)	10	14.1	6	13.6	4	14.8
Psychological strategies and self-care	17	23.9	8	18.2	9	33.3
Recommendations do not change for pregnancy	10	14.1	7	15.9	3	11.1
Recommendations for sexual well-being (e.g., sex without penetration, full arousal before intercourse)[a]	4	5.6	0	0	4	14.8
Use of lubricants[d]	5	7.0	0	0	5	18.5
Use of/change in medications[b]	26	36.6	26	59.1	0	0
Antidepressants (e.g., SSRIs)	3	4.2	3	6.8	0	0
Topical anaesthetics (e.g., Lidocaine)[b]	20	28.2	20	45.5	0	0
Vulvar care (e.g., non-medicinal applications such as ice packs, perineal massage)	10	14.1	5	11.4	5	18.5
Other (e.g., written resources)	11	15.5	4	9.1	7	25.9

Data presented only for those respondents who reported making recommendations regarding vulvar pain management to pregnant women with vulvodynia.

[a]Indicates significant relationship between provider type (physician or midwife) and specific recommendation, $P < 0.05$.

[b]Indicates significant relationship between provider type (physician or midwife) and specific recommendation, $P \leq 0.001$.

[c]Indicates significant relationship between comfort managing maternity care for women with vulvodynia (yes or no) and specific recommendation, $P = 0.05$.

[d]Indicates significant relationship between provider type (physician or midwife) and specific recommendation, $P < 0.01$.

during pregnancy and made recommendations for sexual well-being. More midwives than physicians made a referral for women with vulvodynia during pregnancy. Finally, a significant relationship was found between comfort managing maternity care for women with vulvodynia and recommending physiotherapy; all but one provider who recommended physiotherapy for vulvar pain management during pregnancy reported being comfortable (Fisher's exact test, $P = 0.05$).

Examination and Management During Labour

The majority of our sample (n = 87; 75.0%) indicated that, when a woman with vulvodynia presents in labour, their examination and management during labour is affected by the fact that she has chronic vulvar pain.* The rest either reported that their examination and management during labour is not affected by this presentation (n = 26; 22.4%), did not respond (n = 1; 0.9%), or indicated not seeing women in labour (n = 2; 1.7%).

Specifically, 69.3% (n = 52) of physicians and 85.4% (n = 35) of midwives reported that their examination and management during labour is affected by the fact that a woman has chronic vulvar pain ($P = 0.11$). No significant difference with regard to labour examination/management being affected (yes or no) was found when comparing providers who were comfortable versus not managing maternity care for women with vulvodynia ($P = 0.15$).

Eighty-one of the 87 providers whose labour examination/management was affected responded to the question asking how a woman's chronic vulvar pain affected labour examination and management. These responses (provided by n = 48 physicians and 33 midwives) were coded into numerous categories (Table 3). The most common response overall was the minimization of exams during labour. This response was followed by use of early epidural analgesic, and by changes to the examination procedure such as allowing extra time, use of more lubricant, or use of single-digit, self, or rectal exam. A significant relationship was found

*Two of these respondents did not provide an answer when asked "when a woman with vulvodynia presents in labour, does the fact that she has chronic vulvar pain affect your examination and management during labour?" However, they provided a response when asked how their examination/management during labour is affected and were thus counted as affected.

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Table 3. How physicians' and midwives' examination and management during labour is affected by a woman's chronic vulvar pain

How labour examination/management affected	Total (n = 81)		Physicians (n = 48)		Midwives (n = 33)	
	N	%	N	%	N	%
Birth plan/preparations	4	4.9	2	4.2	2	6.1
Change exam procedure (e.g., extra time; single-digit, rectal, or self-exam; different angle; increased lubricant)	22	27.2	12	25.0	10	30.3
Detailed explanations and discussions (with patient or care providers)	16	19.8	9	18.8	7	21.2
Exams done by experienced or primary care providers	13	16.0	9	18.8	4	12.1
Increased sensitivity, privacy, and reassurance	13	16.0	5	10.4	8	24.2
Minimize exams[a]	53	65.4	26	54.2	27	81.8
Patient control over exams	5	6.2	1	2.1	4	12.1
Use of prenatal strategies (e.g., perineal massage)	2	2.5	0	0	2	6.1
Use of relaxation and breathing techniques	3	3.7	3	6.3	0	0
Use of early epidural	42	51.9	28	58.3	14	42.4
Use of topical anaesthetic or analgesic	12	14.8	8	16.7	4	12.1
Use of other medications	14	17.3	8	16.7	6	18.2
Other (e.g., CS, partner support, avoid perineal massage, hydrotherapy)	6	7.4	5	10.4	1	3.0

Data presented only for those respondents who reported that their examination and management during labour is affected by the fact that, when a woman with vulvodynia presents in labour, she has chronic vulvar pain, and who indicated how they are affected.

[a]Indicates significant relationship between provider type (physician or midwife) and specific way in which examination/management during labour is affected, $P = 0.01$.

between provider type and minimization of exams, with over 80% of midwives reporting the use of this strategy compared with about 54% of physicians ($P = 0.01$). No significant differences were found in terms of how labour examination/management was affected when comparing comfortable versus not comfortable providers (Ps > 0.05).

Postpartum Recommendations for Women With Vulvodynia

Approximately one-third of clinicians (n = 38; 32.8%) reported providing special recommendations regarding postpartum care to pregnant women with vulvodynia. However, the majority of the sample (n = 76; 65.5%), including the majority of both physicians (n = 45; 60%) and midwives (n = 31; 75.6%), reported that they did not do so; no significant relationship was found between provider type and likelihood (yes or no) of providing such recommendations ($P = 0.13$). Two providers (1.7%) did not respond to this item, one of whom had not provided postpartum care for women with vulvodynia.

The 38 respondents (n = 28 physicians and 10 midwives) who made special postpartum recommendations for women with vulvodynia reported a range of recommendations (Table 4). Similar to the vulvar pain management recommendations during pregnancy, the most frequent response was use of medications. The least common response, reported by only two respondents, was use of psychological strategies, specifically relaxation strategies. Among the respondents who provided special postpartum recommendations, significant relationships were found between provider type and making the following recommendations: use of medications (Fisher's exact test, $P = 0.009$), recommendations for sexual well-being (Fisher's exact test, $P = 0.03$), and other (Fisher's exact test, $P = 0.02$). Only one midwife, compared with 17 physicians, recommended the use of medications postpartum, only two of 28 physicians (versus 4 of 10 midwives) made recommendations for sexual well-being, and only three physicians (versus 5 of 10 midwives) made postpartum recommendations that fit in the "other" category. We found no significant relationships with regard to postpartum care recommendations upon comparing providers who were comfortable versus not managing maternity care for women with vulvodynia (Ps > 0.05).

DISCUSSION

Our objective was to investigate the labour management and antenatal and postpartum care of women with vulvodynia reported by a sample of maternity care providers. For some women with vulvodynia, pregnancy may have resulted from artificial insemination of partner's semen at home (and neither internal exam nor intercourse ever experienced). Other affected women may have received many possible

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Table 4. Recommendations regarding postpartum care provided by physicians and midwives to women with vulvodynia during pregnancy

	Total (n = 38)		Physicians (n = 28)		Midwives (n = 10)	
Recommendation	N	%	N	%	N	%
Discussions with patient	3	7.9	3	10.7	0	0
Follow-up/monitor symptoms	4	10.5	3	10.7	1	10.0
Kegel exercises	3	7.9	1	3.6	2	20.0
Lifestyle factors	7	18.4	4	14.3	3	30.0
Physiotherapy	7	18.4	4	14.3	3	30.0
Psychological strategies (i.e., relaxation)	2	5.3	1	3.6	1	10.0
Recommendations do not change for postpartum	4	10.5	2	7.1	2	20.0
Recommendations for sexual well-being[a]	6	15.8	2	7.1	4	40.0
Use of medications[b]	18	47.4	17	60.7	1	10.0
Vulvar and pelvic care	10	26.3	7	25.0	3	30.0
Other (e.g., referral)[a]	8	21.1	3	10.7	5	50.0

Data presented only for those respondents who reported generally providing special recommendations regarding postpartum care to women with vulvodynia while pregnant.

[a]Indicates significant relationship between provider type (physician or midwife) and specific recommendation, $P < 0.05$.

[b]Indicates significant relationship between provider type (physician or midwife) and specific recommendation, $P < 0.01$.

treatments, including pelvic floor physiotherapy, thus being already familiar with techniques that may reduce pain experienced with vaginal examination (e.g., massage; relaxation techniques). Awareness of the range of severity of difficulties, common comorbidities, and different predisposing and maintaining factors among women with vulvodynia can guide our understanding of the many potential ways vulvodynia may impact pregnancy. Individualizing care is challenging, and research with affected women is greatly needed, but identifying strategies used by clinicians who were mostly comfortable (84% of physicians and 61% of midwives) managing obstetric care when vulvodynia is present is important initial information.

For the woman with vulvodynia, there is likely considerable need for information on management of her vulvar pain and related symptoms during pregnancy and postpartum. Given the, albeit temporary, benefit that some women may experience from local anaesthetic pre-intercourse,[12] as well as the significant reductions in vulvar pain that can result from pelvic floor physiotherapy,[13] it is puzzling that these pain management strategies were not recommended by most respondents. Furthermore, the marked comorbidity of vulvodynia with anxiety disorders, and to a somewhat lesser extent depression,[14] may make the antepartum period extremely stressful for women with vulvodynia. Concerns regarding the impact of vulvodynia on labour, fears of being damaged from possible tearing with delivery, and worsening of vulvar pain symptoms may presumably cause immense anxiety for some women. In order to help mitigate these fears, women would likely benefit from antenatal discussions regarding anxiety management strategies and plans for labour and birth. However, "psychological strategies and self-care" and "preparations for labour and birth" were reported by only 23.9% and 14.1% of the respondents, respectively, who made recommendations for vulvar pain management to pregnant women with vulvodynia.

We also note that the subject of sexual well-being for helping women manage their pain symptoms during pregnancy was addressed by only four midwives and no physicians in this study. Canadian data suggest that obstetrical providers in general do not routinely discuss sexual health with pregnant women.[15] Reasons for this lack of discussion may include limited knowledge and comfort, and time barriers on behalf of providers.[16] However, given the sexual difficulties and distress that often accompany vulvodynia,[17] discussion on how to avoid or manage sex-related pain may be important for a pregnant woman with vulvodynia to have with her provider.

The central sensitization associated with vulvodynia,[17,18] resulting in low pain thresholds generally,[19] suggests that labour pain may well be more intense for women with vulvodynia compared to those without. As well, women with a greater degree of phobic anxiety about penetration (i.e., more vaginismus symptoms) typically anticipate more pain,[20] which, in turn, is associated with increased activation of pain circuits in the brain.[21,22] Given these findings, the management of labour pain may need to be adjusted when women have

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vulvodynia. However, over one-fifth of respondents stated that their examination and management during labour were not affected by a woman's vulvodynia. In a recent study comparing women with PVD and/or vaginismus and a group of women without such a diagnosis, there was no difference between groups in the utilization rates of labour and delivery pain-relieving methods.[10] A subsequent commentary noted, however, "it is reasonable to expect that women with chronic vulvovaginal pain would require different and/or additional pain management strategies during labour."[6] While more research is needed to understand women's needs regarding labour and childbirth when they have vulvodynia, we found that early epidural analgesia was recommended by 58.3% of physicians whose exam/management was affected but by less than half of the affected midwives (this difference was not statistically significant). Interestingly, over 80% of affected midwives deliberately limited physical examinations during labour for women with vulvodynia while for physicians this was true of only just over half. Of course, we cannot rule out the possibility that these provider differences may be due to the "risk level" of patients typically seen by physicians versus midwives. In addition, the use of relaxation and breathing techniques was reported infrequently.

With regard to postpartum care, most respondents reported that they did not provide special recommendations to pregnant women with vulvodynia. Of those who did make such recommendations, the most common were use of medications and vulvar and pelvic care. It would seem that sexual practices and how a couple can adapt to pain was not a subject for discussion for the vast majority. As previously noted, we recognize that sexual health is not a topic routinely addressed in the care of pregnant women.[15] However, pregnant women with vulvodynia may be a subgroup in special need of such discussion.

A common theme expressed by women with vulvodynia, in particular PVD, is their sense of imperfection and not being up to standard.[17] The difficulties faced by many women in the postpartum period, such as regret over being unable to nurse or needing instrumentation for delivery or a CS, may increase the burden of distress for women with vulvar pain; in turn, pain intensity could increase given the exacerbation of pain intensity from stress.[17] However, psychological strategies or follow-up visits were rarely recommended for postpartum care. Given the comorbidity of vulvodynia with anxiety and mood disorders,[14] we recommend that health care providers delivering ante- and postpartum care to women with vulvodynia specifically assess for the need for services to support women dealing with mood and/or anxiety symptoms.

Limitations of the current study include the self-selected sample, which may not represent the larger population of maternity care providers. Another limitation is our inability to know how many providers were reached with our recruitment strategies and decided not to participate. We also recruited, in part, from the National Vulvodynia Association which may have led us to obtain a sample that was more comfortable with and interested in the topic of vulvodynia; as such, the reported rates of recommendations/services provided to this population of patients may be an overestimate. At the same time, this study included open-ended questions in order to develop an understanding of the specific ways that maternity care providers practice. Some respondents may not have completed the open-ended items for various reasons (e.g., time barriers), thus leading to an underestimation, for example, of how many providers made vulvar pain management recommendations during pregnancy to women with vulvodynia. Finally, it is possible that some of the differences between physicians and midwives relate to the degree of pregnancy risk these disciplines tend to care for, with midwives tending to see women with lower-risk pregnancies.[23]

Implications

Overall, we recommend increased education be offered to providers of maternity care regarding this common chronic pain syndrome and how vulvodynia may impact antenatal, labour, and postnatal care. Research is greatly needed regarding optimal management of vulvodynia, especially during pregnancy and labour. Currently, treatments for chronic pain, including Cognitive Behavioural Therapy and Mindfulness-Based Cognitive Therapy, are increasingly employed for women with vulvar pain.[24,25] To date, however, these interventions have not been tested among pregnant women with vulvodynia. It may be worthwhile for researchers to evaluate existing evidence-based psychological treatments for vulvodynia-affected women in new samples of pregnant women with vulvodynia, in order to compare effect sizes between these populations. It may also be worthwhile for maternity care providers to start recommending the use of these psychological strategies to help women with vulvar pain management; research with general samples of pregnant women shows that both cognitive behavioural therapy and mindfulness interventions are effective at reducing symptoms of depression[26] and anxiety,[27,28] for example, both of which may be comorbid with vulvodynia.[14] How psychological techniques might modulate labour pain is also important information to gather.

CONCLUSION

Among physicians and midwives in this study who reported making recommendations for vulvar pain management during pregnancy and the postpartum period

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when women have vulvodynia, recommendations were variable, and no one specific recommendation was endorsed by the majority. While most respondents reported that a woman having vulvodynia affected their labour examination and management (with the most common recommendations being minimizing exams and employing epidurals early), we also found that over 20% of the sample reported that their examination/management during labour was not affected. Further research is needed to understand the optimal management of women's vulvar pain and its consequences during pregnancy, labour, and beyond, as well as their specific obstetrical needs. Additionally, future research should assess how vulvodynia and pregnancy/childbirth impact one another. Lastly, we advocate for more educational efforts in midwifery, obstetrical residency, and continuing medical education programs to highlight the particular needs of this group of women.

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