Abstract

Background

Induction of labor currently accounts for around 25% of all births in high-resource countries, yet despite much research into medical aspects, little is known about how women experience this process. This study aimed to explore in depth the induction experience of primiparous women.

Method

A qualitative study was undertaken, using a sample of 21 first-time mothers from a maternity unit in the south of England. Semi-structured interviews were conducted in women's homes between three and six weeks postnatally. Data were recorded, transcribed and analyzed thematically.

Results

Women awaiting induction on the prenatal ward appeared to occupy a liminal state between pregnancy and labor. Differences were noted between women's and midwives' notions of what constituted 'being in labor' and the ward lacked the flexibility to provide individualized care for women in early labor. Unexpected delays in the induction process were common and were a source of anxiety, as was separation from partners at night. Women were not always clear about their plan of care, which added to their anxiety.

Conclusions

Conceptualizing induction as a liminal state may enhance understanding of women's feelings and promote a more woman-centered approach to care. Thorough

preparation for induction, including an explanation of possible delays is fundamental to enabling women to form realistic expectations. Care providers need to consider whether women undergoing induction are receiving adequate support, analgesia and comfort aids conducive to the promotion of normal labor and the reduction of anxiety.

239 words

Key words

Induction, labor, liminality, woman's experiences.

Introduction

Induction of labor is one of the most commonly performed medical interventions in childbirth, accounting for up to 25% of births in most high-resource countries, and over 27% in the United Kingdom (1-4). Despite extensive research into medical aspects of induction, women's subjective experience of this procedure has not been fully explored. In the light of recent policies and professional drivers for woman-centred care and informed choice (5-8) this study aimed to explore in depth the induction experience of first-time mothers and how they perceived the effects of this on their overall birth experience.

Background

Studies on women's experience of induction have often provided a negative picture, highlighting the disparity between women's expectations and experiences (9-13) and a lack of satisfaction with their labor (12, 13). The seminal work of Cartwright (1979) in the UK, which remains among the largest studies in this field, concluded that more power needed to be devolved to women in order to improve the induction experience (11). More recent national and international studies have given a more nuanced picture, with some describing induction as a positive experience (14-16), whilst others identified lower satisfaction with the overall birth experience (17, 18). Most of the earlier studies relied on closed-question surveys, offering limited insight into how women felt and made sense of their experiences. More recent qualitative research has attempted to analyze the overall induction experience from the women's perspective (19-22). However, women's subjective experience of undergoing induction remains a little-known area and further research has been called for (23-

25). Furthermore, there is verbal evidence from staff and students in local maternity units suggests that the gulf between women's expectations and experiences of induction is a growing source of complaints. This in turn suggests that despite a succession of high-profile governmental drives to promote woman-centred care in the UK since the 1970s, women's feelings about induction have not changed significantly since the days of Cartwright's study. In view of the lack of current, qualitative evidence from UK sources, a study was undertaken to explore the overall phenomenon of induction from the woman's perspective within an urban maternity unit in the UK. The study was set within the contextual framework of theories of choice and control. During the process of data analysis, it became apparent that the experience of induction in hospital could be interpreted through theories of rites of passage and liminality. Van Gennep's theory of rites of passage was therefore drawn upon (26), offering a new way for health professionals to understand induction from the woman's perspective.

Methods

A qualitative interview study was undertaken between September 2012 and January 2013, using a purposive sample of women drawn from an NHS (state-run) maternity unit in the south of England. Purposive sampling has been criticised for allowing 'hand-picking' of participants, but has the benefit of increasing the scope of data from information-rich cases (27). Data were collected using single, face-to-face interviews, followed by a hand-search of maternity records for entries relating to induction in order to gain a wider perspective and to contextualize events. Ethical approval was obtained from the Health Research Authority (NRES Committee South Central – Oxford A) and from the local Research and Development committee.

The sample consisted of primiparous women induced at or close to term. All women were aged 18 or over and had been classed as low-risk at the start of pregnancy. Due to cost constraints, it was not possible to employ translators for non-English speakers, thereby excluding this group. All women who met the inclusion criteria were included within the sampling frame, with access controlled by the 'gate-keeping' actions of the senior midwife on duty, who used her professional judgement to decide which women were too vulnerable to be approached. This included women with severe mental health problems and those whose babies were very sick. The value of gate-keepers in protecting vulnerable members of the public has been acknowledged (28) and was required as a condition of ethical approval.

Women were approached by the principal investigator (PI), who explained the nature of the study and sought consent to contact them at a later date. Approximately three weeks later, women were contacted by the PI and invited to participate in the study. Those who agreed were interviewed in their own homes, following verbal and written consent. The final sample comprised 21 women, who identified their ethnicity as white British (n=16), non-white British (n=1) and white non-British (n=4). All were married or cohabiting and most were educated to tertiary level. Most had been induced due to uncomplicated, post-dates pregnancy. All interviews were conducted by the PI and lasted between 30 and 100 minutes. One participant opted to be interviewed by telephone. A semi-structured interview format was adopted, using a flexible schedule of open-ended questions. All interviews were audio-recorded, except in the case of the telephone interview, where at the participant's request, only hand-written notes were made.

All transcripts and data from records were anonymized and pseudonyms allocated, which, to further protect anonymity, do not necessarily reflect the ethnicity of the

participants. Thematic analysis was undertaken - an inductive process whereby small units of data are scrutinized, interpreted and grouped into themes, following an iterative process until all categories of meaning are exhausted (28-31) The software package NVivo10© was used to enhance the categorization of data and the search for recurrent words or phrases.

All 21 participants were induced in hospital. Sixteen were administered vaginal Prostaglandin (PGE_2) on the prenatal ward. Four were deemed not to require this and were transferred to the delivery suite for artificial rupture of the membranes (ARM) and synthetic oxytocin. One woman received only intravenous synthetic oxytocin due to spontaneous, pre-labor rupture of membranes. Four women progressed to a spontaneous vaginal birth, six had instrumental births and eleven had cesarean sections due to complications in labor.

Results

Key themes relating to the experiences on the prenatal ward whilst awaiting or during induction are detailed below.

Delays and anxiety

All women in the study recalled being given specific instructions about arriving at the hospital early in the morning. Despite this, nine women reported delays of several hours between the time of admission to hospital and the time of receiving their first dose of PGE_2.

> *Yeah, coz we were just like "why have you told us to come so early?" and we're just sitting here waiting". (Rose: CD)*

I was told I'd have .... this, this tab thing. […]. I'd have that inserted, sort of in the morning and I didn't actually get it until like 3 or 4 in the afternoon.... (Olivia: CD)

In the example below, delays in commencing induction was perceived as conflicting with the aims of preventing prolonged pregnancy:

I think the delay and the anxiety, being told that there's a risk if it doesn't come out, then not actually cracking on with that process. (Emily: forceps delivery)

Reported reasons for the delays included staff shortages, a busy ward and lack of rooms on the delivery suite. It was evident that many women had either not been prepared for the possibility of delays or had not been informed of the reasons for starting their induction later than anticipated.

Some women had not been informed of the likely duration of induction and had assumed that a single administration of PGE^2 would lead swiftly to birth. The expectations of family and friends added to a sense of urgency to produce a baby:

I literally went in expecting to have the baby within 24/48 hours…Yeah, and it was a shock when the midwife said that it could potentially be four days. (Tanya: Forceps delivery)

…it puts a lot of pressure on you, everyone thinks you're having the baby today or tomorrow, so everyone's texting you and you're like Oh my God! What's going on!? (Nina: CD)

Of the sixteen women who were induced with prostaglandins, only seven spent less than 24 hours on the prenatal ward; eight women were there for between 24 and 48 hours and five remained for between 48 and 72 hours.

Being in a strange place, surrounded by strangers

Many women had no previous experience of being in hospital. Lack of privacy and proximity to strangers was particularly uncomfortable and distressing to those who had not been expecting to share a bay. Women were conscious of the effects of their behaviour on other women undergoing induction.

> *…You can hear everything that's going on, […] I know the other three in my ward were all going through exactly the same, but I'm not keen on being in rooms with other people in that sort of situation. (Megan: spontaneous vaginal birth)*

> *I was aware that everybody else was having their dinner and going to sleep and I was making a lot of noise! (Nina: CD)*

Shared bays inevitably meant night-time interruptions from routine observations and the movement of other women. Several women reported sleep disturbances, which one woman cited as a cause of subsequent adverse events during her labor:

> *... I mean, my problem right at the end was that I didn't push effectively and I always wonder was it partly because I hadn't had enough sleep and food that evening and that then led to the forceps and the episiotomy? […] (Emily: forceps delivery)*

All women had attended some form of pre-natal classes, yet most seemed unprepared for what to expect of the induction process or of life on the prenatal ward. Those who had been expecting to go to the low-risk birthing unit once in labor were disappointed to discover that this option was only open to women in spontaneous labor. Others were surprised that inhalational pain relief (nitrous oxide and oxygen) was not available on the prenatal ward.

Feeling alone and forgotten

Women were generally surprised and disappointed that the hospital policy required partners to leave the prenatal ward at night, thus depriving women of their chief source of support at a time when they felt most vulnerable:

> *… the scary bit is you're going to start labor totally on your own, surrounded by strangers. (Emily: forceps delivery)*

> *…everybody else that goes into labor naturally, they have their husband or partner with them, whereas if you're induced you're just sort of left to get on with it on your own. (Wendy: forceps delivery)*

The sense of neglect extended into the daytime for some women, who felt that they received minimal attention from staff, due to the hierarchy of priorities on the ward.

> *I was like "why are we being forgotten? You've asked everyone else and they're just waiting to be induced ..." [...]...I'm in there...like, nearly screaming every 10 minutes having contractions, they never came to see me...no. (Vicky: CD)*

[...] you're only high priority once you're actually in labor. (Emily: forceps delivery)

There was a notable disparity between women's expectations of induction and the reality they faced. Women had been advised to arrive early, yet the start of induction was often delayed for several hours, due to lack of staff or space on the delivery suite, causing frustration and stress. Furthermore, women had understood that induction was necessary for the safety of their baby and became anxious at finding themselves low on a list of priorities or not monitored as frequently as they had expected.

Information and communication

Although most women reported feeling adequately informed of their overall plan of care, this was not universally applied. Lack of information relating to delays in induction was a source of confusion and stress.

I was so confused the whole time; I just didn't know what was going on. (Vicky: CD)

...I didn't feel there was a lot of information given to be honest...I mean all they could tell me was that they didn't really know when anything was going to happen [...] (Donna: Forceps delivery)

Persistence was sometimes required to gain information.

…I was trying to grill people [for information]. 'What's the statistics? I said […] if this happened to men, there would be every stat… (Jasmine, spontaneous vaginal birth)

More assertive women like Jasmine (above) could secure the information required. Other, less naturally confident women might have been deterred for challenging staff in an unfamiliar environment, especially as it was generally noted that the ward was permanently busy and often short-staffed.

Midwives know best

Trust in the judgement of professionals emerged strongly from women's accounts, yet several stories revealed a tendency for women's perceptions of their bodily sensations to be dismissed by midwives.

> *What we did keep saying to the midwives was "Look, I'm in real pain", and they were saying "Oh no you're not, this is nothing, it's going to get worse" …. (Megan: spontaneous vaginal birth)*

> *I had a new midwife that came in the evening and she tried to make (partner) leave …and I said "well, I'm in labor" and she said, "no you're not". (Nina CD)*

These examples suggest the exercise of power, subjecting women to patient hood and engendering a sense of loss of control. This is further illustrated by Megan's midwife reinforcing the dominant position of the staff:

> *We were told […] 'six hours later, you'll come up [to the delivery suite] and if you're far enough gone we'll let you have the baby'… (Megan: spontaneous vaginal birth)*

The implication is that women's bodies ceased to be under their control once in hospital and that they could not be trusted to understand their own bodily sensations. This heightened the impression of induction as a confusing and sometimes frightening experience.

There was no obvious pattern of relationship between the reasons for induction and women's retrospective evaluation of the experience. Furthermore, most of the women who had experienced complications associated these with interventions during labor or with mode of birth and not necessarily with induction *per se*. Not all comments were negative; several women reflected favorably, particularly on individual staff members.

> *…the phenomenal midwife, really lovely, made me feel really comfortable […] they were fantastic. (Fay: CD)*

Three of the four women who progressed to a spontaneous vaginal birth responded more positively overall, yet two of these were recent immigrants from countries where concepts of choice in childbirth and woman-centered care were in their infancy, therefore expectations may have been lower than those of others.

Discussion

The voices of the women in this study highlight the need for a more personal, woman-centered approach to care on the prenatal ward and for better information and preparation for the process of induction. Interpreting women's stories of induction through the lens of liminality (26) offers a new way of understanding this

experience, which may help health professionals to adopt a more empathic approach.

The concept of liminality, identified by the ethnologist Arnold Van Gennep (1873-1957), describes a state which is entered at the threshold between one stage of life and the next, such as birth, coming of age and marriage. In this state, normal order is suspended and the person undergoing change is displaced from their everyday context into a state of strangeness (26). Van Gennep's concept of liminality has spatial connotations, involving ritual removal to a different place (32, 33), which in the case of induction is represented by admission to the prenatal ward. This paper posits the notion that the state of suspense, strangeness and uncertainly during induction is consistent with a state of liminality.

The concept of liminality has been applied to other childbirth-related situations, such as the experience of parents with a very pre-term infant (34). Labor has long been identified as a liminal state between pregnancy and motherhood (35-37). Although this has not previously been applied to induction, it is alluded to in the findings of other, small-scale interview-based studies conducted in a single place of care. Gatward et al (2010) identified the temporal disruption felt by women booked for induction for post-dates pregnancy, leading to a shift in expectations and sense of being '*on someone else's clock' (19)*. Moore et al (2014) and Murtagh and Folan (2014) highlighted the lack of information prior to and during induction which left women feeling unprepared, particularly for the duration of the process and the pain of contractions (20, 21). In comparison, Henderson and Redshaw's (2013) large-scale, mixed-methods study of 5,333 women from several UK maternity units also highlighted the distress caused by separation from partners at night, lack of privacy,

delays, feelings of neglect and not being believed when in labor, suggesting that these experiences are not isolated (22).

Evidence from the current study builds on previous works in demonstrating how induction separates women from their everyday surroundings, upturns their expected trajectory of labor and birth and places them in an unfamiliar and sometimes frightening environment, where control is relinquished. This is consistent with a liminal state (26). Women generally expect to begin labor at home, whereas in-patient induction means starting labor '*surrounded by strangers'* (Emily). This sense of chaos and displacement may be enhanced by indefinite and unexplained delays in the induction process, lack of information and policies which confuse and disempower. Spontaneous labor, once established, normally leads to birth within a matter of hours provided skilled help is at hand. Conversely, induction may fail or be indefinitely postponed or interrupted for reasons which are entirely beyond women's control. In such circumstances, women find themselves powerless to progress without the agency and permission of another.

Women in this study were on a threshold: unable to go home, yet unable progress to the labor ward or have access to labor support until labor was 'officially' acknowledged. The latter depended on the clinical judgement of midwives rather than women's own instincts, emphasizing differences in the understanding of 'being in labor' between women and health professionals. This may arise from epistemological differences in the concepts of labor between medical and social models of care, as aptly illustrated in Christine McCourt's (2009) narrative accounts of women's birth experiences in a London hospital (36).

It is recognized that long periods of discomfort and isolation from their usual support networks can cause women to become physically and emotionally drained by the time labor is fully established (36, 38), which may result in dysfunctional labor, due to the effects of stress hormones on the production and release of oxytocin (39-41). It is possible, therefore, that the stresses caused by induction could have contributed to subsequent delays in labor, which may have accounted for the high rate of operative or instrumental births among this sample of women.

Limitations and strengths

Participants were drawn from a single maternity unit in England. However, guidelines of the National Institute for Health and Care Excellence (NICE) set the standards for IOL in the UK and despite local differences in the type of prostaglandins used, there is no reason to conclude that practice in the unit is atypical. At the time of data collection, the use of shared bays and the exclusion of partners at night was common to many NHS units and remains so today. The problem of understaffing will be familiar to many health professionals worldwide. This was a small-scale study and as such, makes no claims to be generalizable; what it has achieved is highlighting the experiences of a purposive sample of women at an NHS maternity unit that is not atypical of others in the UK or in the region. These findings provide an outlook on the induction experience to which health care professionals in the UK and worldwide, may be able to relate and thereby consider how care in their own units can become more woman-centred.

At the time of data collection, many non-white or non-British women spoke very limited English and were therefore excluded under the terms of ethical approval.

Most previous studies of women's experiences of induction, regardless of size or design, make no mention of ethnicity, thus there are few points for comparison. One similarly-sized US study noted that the majority of participants were white, despite being conducted in an ethnically diverse area (20). It has previously been observed that where the sample is self-selecting, participants from higher socio-economic groups are commonly over-represented (42). It may be surmised therefore that the relative homogeneity of the sample may reflect the socio-economic status of non-white women in the area.

Rates of operative and instrumental birth were high among the sample group (marginally over 80%). Local statistics on the mode of birth following IOL could not be obtained from the maternity unit, however, rates of all CD and instrumental births were approximately 4% higher than the national average, although lower than some other maternity units in the region.

Since this study was undertaken, the maternity unit from which participants were selected has introduced a policy permitting partners to remain overnight on the prenatal ward and has introduced outpatient induction for women with uncomplicated post-dates pregnancies. Although interest in this area pre-existed the culmination of this study, the presentation of these findings to senior clinicians and managers at a very well-received seminar was likely to have been a contributing factor.

Conclusions

To provide a better environment for women undergoing induction in hospital, health professionals must firstly endeavor to prepare women for life on the prenatal ward

and for the reasons for, delays and interruptions, so that women can build realistic expectations of the likely trajectory of induction. Outpatient induction is increasingly being offered to low-risk women (45, 46), but where this is not advisable, attention should be focused on creating an inpatient environment that does not treat healthy women as sick patients. Conceptualizing induction as a liminal state may enhance midwives' understanding of women's feelings during this process and promote a more woman-centered approach to care. In particular, there is a need for greater recognition of the experience of early labor following induction and acknowledgement of women's instinctive understanding of being in labor. Care providers need to value women's time and consider whether they are providing adequate support, analgesia and comfort aids conducive to the reduction of anxiety and the promotion of normal labor.

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