Breaking – Bad News

Women's Experiences of Fractures at Midlife

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ABSTRACT

Objective: To gain understanding of the experiences and sequelae of fractures in women aged 40-65 years and to assess whether it is linked to overall bone health assessment.

Method: A qualitative study using face-to-face indepth interviews.

Findings: Contrary to the common belief that fractures are benign, for middle-aged women, fractures have a significant impact on their well-being in both the short and long term. Women report significant pain as well as an immediate need for help from family and professional caregivers. They experience interruptions to daily and leisure activities, employment, daily life and mobility. Only a minority of women and/or their family physicians initiated follow up to investigate bone health subsequent to the fracture.

Conclusions: Bone health is often examined in the context of already established bone disease. This study suggests a need for a closer examination of fracture treatment in the context of preventive care, and early detection of osteoporosis.

La traduction du résumé se trouve à la fin de l'article.

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While discussions of chronic conditions,¹ cancer,^{2,3} age-related processes⁴ and lifestyle prescriptions⁵ are frequent in the research literature and the focus of many health promotion programs on women at midlife, acute, short-term threats to well-being are noticeably absent from discussion. Currently the focus on bone health for women tends to be on osteoporosis. In 1993 it was estimated that \$1.3 billion was spent in Canada on healthcare related to osteoporosis, and osteoporotic or fragility fractures are recognized as one of the most serious problems in public health.⁶⁻⁹ Osteoporosis is, however, only one aspect of bone health, essentially a confirmation of bone deterioration past primary prevention.* In the existing literature, mostly quantitative, there is little focus on patient experiences of fracture recovery other than in elderly patients with osteoporotic fractures or hip fractures.

This manuscript presents data from a pilot study that explored the questions, "What are women's experiences of fractures at midlife?" and "What connection is made between those fractures and bone health by women and their physicians?"

METHODS

This qualitative study is part of an ongoing program of research focused on midlife women and bone health. The clinical author (LM) routinely gets permission from patients to contact them in the future for potential research project participation. Purposive sampling¹⁰ was used to identify participants from the cast clinic database along the continuum of ages from 40-65, and with fractures at varied sites. Initial screening confirmed their age and their English competency. The Conjoint Health Research Ethics Board, responsible for studies through both the Health Region and the University, granted ethical approval of the study.

Consent forms were reviewed and signed by women who agreed to participate and face-to-face indepth interviews were conducted with them. Our experienced research assistant, who received

* The WHO definition of osteoporosis is a bone mineral density (BMD) (reported in a T score) more than 2.5 standard deviations below the young adult mean. This clinical definition is an objective tool that has proven useful with epidemiological data in predicting future fracture risk.⁶

training specific to the project, used an interview guide, with questions added as new issues arose or questions of confirmation or disconfirmation arose during the interviews. Data collection continued until saturation was reached.^{10,11} Observational data on socioeconomic status, height and weight were part of the interviewer's field notes. Participants were assigned an identification code to maintain anonymity.

Interviews were audio recorded and transcribed verbatim. An immersion/crystallization,^{12,13} approach to data analysis and interpretation was used. Initially three members of the research team immersed themselves in the data through a process of reading and re-reading the transcripts to identify initial codes. These were discussed and solidified, then used to explore relationships and contingencies among them. Further analysis produced a crystallization of key themes that appeared throughout the data. Member checking was done by taking results from early interviews to subsequent ones and having participants further reflect on them. As a final step in the process, we searched for disconfirming evidence and testing interpretations against alternative understandings. Data summary, analysis and interpretation were aided by the use of the QSR N6® program.¹¹

Verification, or strategies of ensuring validity during the course of the study, was addressed through situating the study in the literature, bracketing, sampling to redundancy and methodological cohesion.^{11,14} Within-project validation was addressed through using multiple research team members to develop codes and interpret the data, searching for disconfirming evidence and thick description.^{11,15-17}

FINDINGS

A total of 19 women were interviewed for this stage of the pilot study, ranging in age from 40 to 65 at the time of the fracture. They were all urban residents. Some women were employed, others had retired or had never been part of the paid workforce. Interviewer field notes indicated that their heights and weights varied, none were obese and none appeared anorexic. Not all women required surgery for the trauma fractures, but follow-up appointments at an orthopedic cast clinic were the common element in their treatment. Regardless of

the source of injury, all women attributed the fracture to accidental and external causes, i.e., not to bone condition.

We present here two important sequelae of the fractures. First, for most women the fracture was a significant event in their lives that resulted in changes in daily routine, wellness and ongoing activities. Second, a connection between the fracture and bone health by women and their professional caregivers was often equivocal.

After the fall...

While leg fractures sometimes immobilized women for a number of weeks, arm and wrist fractures also rendered women unable to care for their basic needs. Although clinically broken bones usually heal in a matter of six weeks to six months, the process of recovery from the fracture for individuals in our study was often much longer. The majority of our participants were interviewed approximately one year after the fracture. Most women reported pain, both at the time of the injury and enduring for some a full year later. Recalling the day of the injury, one woman said, "...you know, you don't think there's so much pain in a bone." Muscle pain at the fracture site and pain related to hardware (e.g., nails, rods) implanted during surgery to aid the healing process, were also reported.

For most women, the immediate need was for help with household tasks and mobility. Partners and teenaged children helped some women get by. However women also called upon their parents or friends to come and assist, hired home care or even moved back in with their parents. For some this was for a week, but for others a matter of months.

The injury also affected women's employment. "And I thought, OK, I have to get up [from the ground] because I have to work tomorrow [laughter]. And as I laid there, I realized, Hey, you're not going to work tomorrow!" Although one woman with a wrist fracture who was her family's sole support returned to work the following day, other women were off work for a period of several days to eight months. Even after employment resumed, women reported ongoing limitations, particularly among those with upper body fractures. These included how they managed to hold or lift items, and in the extreme, changing from right- to left-handed dominance.

Everyone spoke of her initial fear of slipping, falling or suffering another fracture and took measures to decrease risk. Many women noted that the fear diminished over time, but for others it was still present. Women downplayed the effect of the injury on their routine activities. However, when speaking of leisure activity women presented contradictory statements. A typical comment would be that recovery was complete, and would then be followed by, "Except I didn't ski this year because I'm just a little nervous. I don't feel that comfortable [laughs]." One woman summarized the reaction of many to an injury: "...probably the most surprising thing about the whole experience was just how long the recovery period was and it still bothers me and I suspect it probably will for some time..."

And fractures are connected to...

While women usually saw their surgeon for follow up at about 3 months after the fracture, and sometimes subsequent to that appointment for a final check up, there was little involvement of their family physicians. For those who had told their family physicians about the fracture, the physician's role was ambiguous. One woman noted that, "I would have thought ... that [family] doctors would be more pro-active in providing information".

The surgeon in our study often suggested the patient get a bone mineral density (BMD) test subsequent to the fracture. Women and their family physicians met these requests with equivocal reactions. Three of our participants had already been diagnosed with osteoporosis before the fracture. Among those who had a BMD subsequent to the fracture, the rationale was sometimes 'to establish a baseline'. However it was also common for women to have heard nothing back on the results or be vague in recalling them. At other times, there was disagreement in the interpretation of the results. For example, one family physician interpreted a woman's results as low normal, while the orthopedic surgeon had concerns. These types of experiences added to women's confusion regarding the significance of the fracture in relation to their bone health. Those who had been tested and did not have compromised bone density spoke vaguely of doing prevention-related activities in the future,

such as stocking up on calcium just before menopause, being more vigilant in taking supplements, or committing to a weight-bearing workout schedule. For some, there was a sense that eventually "...everyone has a little bit of osteoporosis."

When women received clear information and understood that bone density was not optimal, i.e., a diagnosis of osteopenia or osteoporosis, the news was devastating. Women pointed out that they did not have the typical risk factors, that they 'drank lots of milk' or exercised or were too young to have this disease be part of their personal health history. Others commented that they 'didn't fit the profile', got lots of exercise and weren't small boned. One woman noted, "[I]t was a surprise to me ... [although] our grandmothers are shrinking ... it had never occurred to me that I might have [it]." There was a sense of injustice that also accompanied the surprise of diagnosis as well as feelings of loss of body integrity.

DISCUSSION

Based on our indepth interviews of 19 women, fractures at midlife appear to be more harmful to women's well-being than is commonly known or acknowledged. There is an urgent need to recognize the fractures as potentially related to women's bone health even at early midlife. Earlier studies have illustrated that women may be aware of the risk of osteoporosis at a population health level, but are generally unconcerned at midlife.¹⁸ Other researchers have shown that women receive inadequate information related to osteoporosis, and even when the information is good, it may fail to trigger prevention-related behaviour.¹⁹

Our study suggests that fractures at midlife do not consistently result in follow-up for bone health investigation. Furthermore, it seems that the opportunity for prevention is often poorly understood by these women and their physicians. In spite of women's emphatic statement that they do not want to repeat a fracture experience, and the associated social, economic and public health costs, little connection was made between these fractures and future risk of fractures. Yet this relationship has been clearly established, especially for people aged 65 and older.²⁰

This research is limited by several factors. Our participants were all seen at the same cast clinic; it is important that future studies explore the experiences of women seen in a variety of settings. The retrospective interviews enabled women to reflect on their experiences from the perspective of time. However, the process of recovering from fractures and documenting follow-up care would be better understood using a series of individual prospective interviews. As well, gathering data from both family physicians and orthopaedic surgeons would add their standpoint to women's reports of their interaction with these health care professionals.

The image of osteoporosis as an 'old woman's disease', in spite of research²¹ that suggests much earlier risk, was common among this sample. In reality, risk of osteoporosis begins early²¹ and bone fractures at midlife have important public health implications. The financial cost to women, their families and health care delivery are growing, and this will continue as long as borderline osteoporosis remains underdiagnosed and undertreated. It will be important for future research on women and bone health to explore how decisions relevant to early detection and intervention are made by women and their physicians in order to add to the promise of this area of investigation and address relevant public health issues.

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RÉSUMÉ

Objectif : Comprendre l'expérience et les séquelles des fractures chez les femmes de 40 à 65 ans et déterminer les liens possibles avec l'évaluation générale de leur santé osseuse.

Méthode : Étude qualitative à l'aide d'entretiens en profondeur menés de face à face.

Constatations : Contrairement à l'opinion répandue voulant qu'elles soient bénignes, les fractures ont d'importantes répercussions, à court et à long terme, sur le bien-être des femmes d'âge moyen. Ces femmes signalent une douleur importante, ainsi qu'un besoin immédiat de recevoir l'aide de leur famille et de fournisseurs de soins professionnels. Leurs activités et leurs loisirs quotidiens, leur emploi, leur vie quotidienne et leur mobilité sont perturbés. Seule une minorité de ces femmes et/ou de leurs médecins de famille font un suivi pour évaluer la santé osseuse après la fracture.

Conclusions : On étudie souvent la santé des os dans le contexte d'une maladie osseuse déjà établie. Notre étude suggère qu'il faudrait se pencher sur le traitement des fractures dans le contexte des soins préventifs et du dépistage précoce de l'ostéoporose.

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