ORIGINAL ARTICLE

How does the thought of cancer arise in a general practice consultation? Interviews with GPs

MAY-LILL JOHANSEN, KNUT ARNE HOLTEDAHL & CARL EDVARD RUDEBECK

Department of Community Medicine, University of Tromsø, Norway

Abstract

Background. Only a few patients on a GP's list develop cancer each year. To find these cases in the jumble of presented problems is a challenge. **Objective.** To explore how general practitioners (GPs) come to think of cancer in a clinical encounter. **Design.** Qualitative interviews with Norwegian GPs, who were invited to think back on consultations during which the thought of cancer arose. The 11 GPs recounted and reflected on 70 such stories from their practices. A phenomenographic approach enabled the study of variation in GPs' ways of experiencing. **Results.** Awareness of cancer could arise in several contexts of attention: (1) *Practising basic knowledge*: explicit rules and skills, such as alarm symptoms, epidemiology and clinical know-how; (2) *Interpersonal awareness*: being alert to changes in patients' appearance or behaviour and to cues in their choice of words, on a background of basic knowledge and experience; (3) *Intuitive knowing*: a tacit feeling of alarm which could be difficult to verbalize, but nevertheless was helpful. Intuition built on the earlier mentioned contexts: basic knowledge, experience, and interpersonal awareness; (4) *Fear of cancer*: the existential context of awareness could affect the thoughts of both doctor and patient. The challenge could be how not to think about cancer all the time and to find ways to live with insecurity without becoming over-precautious. **Conclusion:** The thought of cancer arose in the relationship between doctor and patient. The quality of their interaction and the doctor's accuracy in perceiving and interpreting cues were decisive.

Key Words: *Cancer, diagnosis, doctor–patient relations, general practice, Norway, phenomenography, qualitative research*

Introduction

On a GP's list, only a few people will develop cancer every year [1]. Finding these is a challenge for the GP. People who turn out to have cancer may present with vague symptoms, and many have alarm symptoms without cancer [2–4]. In as much as one in five GP consultations, patients might be worried about cancer [5]. General practice differs from other disciplines: problems are diverse, illness is seen early, cues are fewer, decisions are made at lower levels of probability, and a background of personal knowledge is often present [6]. Despite its low probability, the seriousness and treatability of cancer will give a high priority for investigation, once it is thought of. How do GPs get a hunch that “this could be cancer”?

What the physician perceives early in the encounter with the patient, often triggered by the presenting complaint or the patient's own suspicion, will lead to the initial diagnostic hypotheses [7,8]. An instant recognition of salient features in the patient's presentation (pattern recognition) might link the case to the doctor's prior experience and knowledge [9] or to rules of thumb [10]. “What experienced clinicians possess ... is an immense and well-sorted catalogue of clinical cases and the clinical judgment to know how to use it, and that store of knowledge is activated by seeing, touching, and questioning the patient” [11]. The early hypotheses subsequently frame a search for clues to rule a diagnosis in or out. When symptoms are ambiguous, the initial hypotheses will often determine the way further clinical information

This study revealed four main ways GPs come to think of cancer:

- practising basic knowledge;
- interpersonal awareness;
- intuitive knowing;
- patients' or GPs' fear of cancer.

is sought and interpreted [12]. Thus, a good beginning is half the battle.

While others' explicit thoughts can only be known through words, tacit thoughts and feelings can be grasped by bodily gestures and expressions [13]. Bodily empathy, the capacity to grasp another person's bodily experience, can help patients present symptoms in a way that is valid to the original experience and help doctors understand [14]. Humans have an intention to unify perceived particulars into a larger, coherent pattern. Our attention has a focal awareness of the whole (e.g. a plot, a melody, or a clinical picture) and a subsidiary awareness of the parts (e.g. cues, sounds, or signs). The part is integrated into the whole [13,15]. Thus, when listening to the patient's story, the doctor works interpretively, connecting small and apparently unrelated clues, which taken together can reveal the narrative plot: a complete clinical picture [16]. Hamilton said that most doctors have an innate sense that their patient is ill, but regarded this as almost impossible to research [4]. In the research field of early cancer diagnosis, there has been a focus on epidemiological studies aimed at refining the predictive value of single symptoms, which again can be used as a basis for guidelines. We set out to explore more broadly how GPs come to think of cancer in a clinical encounter.

Material and methods

Theoretical approach: Phenomenography

Phenomenography [17–19] aims to describe variations in how people understand or make sense of a certain phenomenon, such as diagnostic thinking. The epistemological assumption is that, depending on context or perspective, humans experience a phenomenon differently. These *ways of experiencing* are, however, limited in number, otherwise we would not be able to communicate about the world. Experiences are seen as a relationship between the individual and the world – as essentially non-dualistic. Phenomenography shares this ontological assumption with phenomenology. While the latter studies how world and subject mutually constitute each other on a perceptual, preconceptual level, phenomenography

mostly studies conceptualized phenomena in a socially constructed world.

Sampling

Semi-structured individual interviews [20] with Norwegian GPs, recruited through a national survey about cancer in general practice, were carried out. A total of 16 GPs were selected purposively from those who within the survey had agreed to an interview, ensuring variation in experience, gender, and location. Two rounds of interviews have been carried out by MLJ. In 2007, 14 GPs were interviewed, mainly about their care of people with cancer [21]. In 2010, these GPs were contacted again, for an interview about diagnosing, resulting in a second encounter with 11 GPs.

Interviews

Shortly in advance, the GPs received an e-mail, inviting them to think about consultations during which the thought of cancer arose. During interview, the GPs recounted and reflected on altogether 70 such stories from their own practice. If not mentioned, the interviewer asked (see Figure 1) about the significance of the first impression, previous knowing, clinical experience, and intuition in their clinical reasoning. All interviews lasted for about an hour and took place in the GP's office, except for two interviews that were conducted by telecommunication for reasons of distance. The talks were recorded digitally and transcribed verbatim by an assistant. Citations were translated by MLJ. Data were stored, organized, and retrieved using the data software NVivo9.

Analysis

The interpretation of an utterance was made iteratively, moving between several contexts – the interview from which it was taken, the “pool of meanings” from all the interviews, the researchers' preconceptions, and the emerging new understanding. Utterances were sorted into groups and borderline meanings examined; groups of quotes were arranged and rearranged until they were finally narrowed down to *categories of description*. These are logically ordered in the *outcome space* [19].

Results

Categories of description

We found four main described ways of becoming aware of cancer in a consultation, which expressed the

Interview guide
<i>Preparatory question</i>
Try to think back to some examples from your practice, when you have got a suspicion during the consultation that the patient could have cancer. Tell me the stories!
<i>First impression</i>
Was there anything in the patient's presentation that made you apprehensive, even later?
Was anything different from how you had perceived the patient before?
<i>Awareness</i>
What do you listen for in the patient's story?
How can you as a doctor understand what the patient is talking about?
Have you ever noticed your own bodily reactions during a consultation?
<i>Procedure</i>
How do you choose between useful elements in a consultation:
Topics to pursue, exams to perform, tests to order?
What do you emphasize in your clinical decisions?
Has this changed with clinical experience?
How does it affect your approach if the patient is known to you, or unknown?
<i>Immediate understanding</i>
If I mention the term gut feeling or intuition, what are your thoughts about that?
<i>Additions</i>

Figure 1. Interview guide.

variation in this group and represented possible ways for the GPs to experience this phenomenon. They are contexts of attention, in which the thought of cancer arose. In any one consultation more than one of these could contribute to the thought of cancer.

1. Practising basic knowledge. Diagnosing cancer involved practising basic lessons learned in medical school, focusing on overt alarm symptoms and signs that should not be ignored. To spot the red flags, GPs stressed the simple things: getting an overview through the patient's story, a problem-oriented clinical examination, and simple lab tests. The thought of cancer sometimes came later, during the investigation.

GP8: ... those things I was taught to be aware of are the ones I emphasize.... Namely, in those cases where in retrospect you can say that, yes, this you could have caught it before doing many

tests or investigations ... you could have caught it by the clinical presentation, then it is often congruent with what the textbooks said.

Experienced GPs said that, as beginners, they were worried about disregarding rare diseases; they thought like hospital doctors. Meanwhile, they had learned the epidemiology of general practice, where you see 99 innocent moles before one malignant one appears. In contrast, some GPs with less experience said that their way of thinking was more complicated now than as beginners, because they had seen patients with odd symptoms that revealed serious diagnoses.

2. Interpersonal awareness. Being alerted to the possibility of cancer was also about noticing changes in patients' presentation and being aware of bodily expressions and suggestive words. The GPs said that knowing the history of the patient and family, their perceptions of illness, how they usually described their complaints, and their usual appearance was valuable and could make it easier to notice that something was different. Some said that, without thinking, they might note the way that patients entered or a change in their glance.

Seeing unknown patients could have the advantage of seeing them anew, with fresh eyes, but also implied the increased risk of misunderstanding and repeating former doctors' assessments. When people who never went to the doctor suddenly turned up, this was in itself alarming.

GP8: You know that when ... Mr Hansen comes and complains about something, then something is seriously wrong.

GPs feared that people who came often and had many worries ran the risk of being ignored and their complaints not brought to the scrutiny of clinical dialogue. Seeing many patients a day, being in a hurry and being tired were seen as threats to awareness. Staying alert in each consultation in the same practice over the years could be a challenge.

3. Intuitive knowing. Getting the suspicion of cancer was sometimes closely linked to what some participants called a gut feeling or an intuition. This mode of knowing could be about quickly grasping the essence of the presented illness: Is it serious or not? It could also make the GPs concerned about something beyond what they had overtly grasped, and make them ponder. Finding words for this feeling could be difficult.

When asked, the GPs had different notions regarding intuition. For some participants, intuitive

knowing was the professional summing up of the pieces of evidence that together contributed to the feeling that something did or did not add up right.

GP2: [about gut feeling] ... it is the sum of all your knowledge, the sum of all your experience ... all your knowing from reading updates, attending courses, all the patients you have had whom you ... have investigated, referred and received feedback about. And then there is your knowledge of humankind and of the context, namely the person and patient and the community you work in.

It seemed from the GPs' stories and statements that intuitive knowing was more common with acute or subacute conditions than with cancer, where things advance slowly, and the doctor had to be more like a detective.

Some GPs recounted negative experiences of referring patients on for biopsies or CT scans, which were rejected because of "lack of medical indication", and later revealed as cancers. The suspicion often involved tacit knowing, which was not written into the referral.

GP4: sometimes there ... is slightly more behind than ... you might say a feeling, an intuition ... heavy smoker ... yes, maybe a little change of weight and that, nothing big ...

4. Fear of cancer. The thought of cancer was often connected to the patient's fear of having it, or the GP's fear of overlooking it. Thus the thought of cancer arose from an awareness of either patient or GP, or both, within the relationship.

GP6: I feel that I think about cancer all the time, because I am so scared of overlooking it.

Consequently, a lot of the GPs' daily work was about "excluding" cancer, and questions of probability and risk. Some of the GPs used the words "living with uncertainty" about both the patients and themselves as doctors.

GP2: It is the GP's destiny to ... be able to live with that uncertainty together with the patient.

The younger doctors, in particular, felt that living with this uncertainty was not easy. Some doctors mentioned that their precaution could lead to "unnecessary" investigations. Fear of cancer could sometimes lead patients to come, as a GP coined it, "too early". In any case, the patients' worries should, according to the participants, be explored and taken seriously. If the GPs did not suspect cancer and saw

no need for referral, the patients should at least have their symptoms explained.

Outcome space

Category 1 was explicit medical knowledge and skills, like alarm symptoms, epidemiology, and clinical know-how. Category 2 was interpersonal, interactional, and contextual skills. Category 3 was an immediate feeling regarding the patient's clinical situation, often called intuition or gut feeling. Category 4 linked the thought of cancer to fear and uncertainty.

Discussion

This study departed from research on diagnosing cancer in primary care and drew on insights about clinical reasoning in general. The phenomenographic approach enabled us to describe variations in GPs' understanding of the diagnostic process. A limitation of our approach was that interviews mainly access verbalized, retrospective stories, and explicit policy. Variables important for judgement might not be recognized by the GPs themselves. Recording or observing diagnosis in action, immediately followed by interviewing and "thinking out loud", might have grasped more of the tacit knowledge implied, including the crucial interaction between doctor and patient.

Hamilton [4] found in studies of patient records that "The most powerful predictor of cancer is not a particular symptom or test, but a GP's summation of all the subtle clues present in the consultation". Otherwise, there is not much research in early cancer diagnosis that focuses on the interpretative character of the diagnostic process. Education on diagnosing cancer is often about rules of thumb like "red flags", which have been shown to work well for raising the thought of cancer and preventing a diagnostic delay [2,22]. However, medical education has often concealed the fact that, however simple the case to be solved, interpretation is always involved [11]. GPs in our study, who said that diagnosing cancer was mainly about basic knowledge, also related stories of the difficulties, uncertainties, and subtleties of interpreting symptom presentation and test results, challenges that we think are inherent in the craft of medicine.

Our study suggests that "subtle clues" are not only perceived by the GP as hinting at a certain disease, but are noted, maybe unconsciously within interpersonal awareness, as changes in the patient's way of being with the doctor. Our doctors emphasized a receptive, sensible awareness that was seen as a premise for recognizing clinical cues [23,24]. Thus, the thought of cancer arose in the relationship between

doctor and patient. The GPs were afraid of ignoring symptoms that were just mentioned en passant. Handling many problems during a consultation may lead to cognitive overload for the doctor, resulting in faulty reasoning and diagnostic delays [25]. Prior knowledge about the patient was for our doctors a helpful background on which to note changes [26], but also seen as a possible pitfall, a threat to alertness. For people with colorectal cancer, seeing a regular or well-known doctor has been associated with longer diagnostic delays [25,27]. However, people with a regular doctor sought help faster [25]; hence symptoms were also more vague, and thereby more difficult for their doctor to interpret.

Many GPs relied on a gut feeling or intuition. Stolper et al. [28] also found that GPs used gut feelings, as either a sense of reassurance or a sense of alarm. Some of our GPs gave a definition which fits with contemporary theory, seeing intuition as a process of thinking where knowledge from long-term memory is processed automatically and unconsciously, resulting in a feeling that can serve as basis for judgement [29]. Thus, basic knowledge, interpersonal awareness, and clinical experience would join to form intuitive knowing. Other GPs hesitated to describe or acknowledge intuition. A lack of vocabulary for the rationale behind decisions is consistent with both a tacit component and a theoretical deficiency within medicine. The practitioner “makes innumerable judgements of quality for which he cannot state adequate criteria ... he is dependent on tacit recognitions” [30]. However, if this translates into vague descriptions in a referral, diagnostic delays may result [31].

Our study confirmed, from the GP’s point of view, previous research regarding the high degree of cancer fear amongst patients, and added a new notion of fear in doctors of overlooking cancer, thus playing a further part in the diagnostic process. Doctors’ fear of overlooking cancer can raise their alertness, but also lead to a precaution that precludes sensitivity. The fear was connected to a shared uncertainty, a threat to the patient’s existence and to the GP’s professional trustworthiness. Being embarrassed at bothering the doctor with minor symptoms might result in a delayed consultation [32,33]. Explaining in a non-judgemental way why symptoms are not suspicious, as GPs in our study recommended, might prevent embarrassment, and build the trust that invites the patient to return if the symptoms persist.

Conclusion

The thought of cancer arose in the relationship between doctor and patient. The quality of this interaction was crucial for the appropriate understanding and accurate description of symptoms.

Our study completes and broadens what is already known in the field from clinical epidemiological studies, which relate mainly to the practising of basic knowledge. The other contexts of attention in which the thought of cancer may arise should also be recognized in medicine.

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Ethical approval

The study has been approved by the Regional Committee for Medical and Health Research Ethics of Northern Norway (Ref 200503439-10/IAY/400) and by the Data Inspectorate of Norway (Ref 05/01607-9/CGN).

Author’s note

The original idea of the study came from KAH. All authors discussed the study design and developed the protocols. MLJ and CER performed the analysis. The article manuscript was written by MLJ, supervised by CER, and critically revised by KAH.

Declaration of interest

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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