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Cholesterol lowering medication

Patients' knowledge, attitudes and experiences

Background

Despite evidence of the efficacy of cholesterol lowering medication, it is known there is suboptimal patient adherence to this medication. The aim of this study is to investigate patient knowledge, attitudes and experiences of their cholesterol lowering medication, and explore patient views regarding programs to support self management.

Method

A semiquantitative exploratory study using semistructured telephone interviews of adult patients with poorly controlled hyperlipidaemia.

Results

Twenty-six patients were interviewed. Most patients could name at least one risk factor for their hyperlipidaemia. Approximately one-third of patients reported they did not understand the reasons they were taking their cholesterol medication and over two-thirds did not understand how their medication worked. Most reported that their general practitioner was their main source of information about cholesterol. Many expressed a desire to be better informed about cholesterol, its risk factors and medication and that an information session at their local general practice clinic would be useful.

Discussion

This study provides preliminary evidence that patients on long term statin therapy may have gaps in their knowledge about their condition and treatment options and a desire to be better informed.

Keywords: lipid metabolism disorders; qualitative research; research, self care

Hyperlipidaemia is a major risk factor for cardiovascular disease (CVD), which is itself the leading cause of mortality in Australia.¹ In 2005–2006, hyperlipidaemia was the fourth most frequently managed chronic problem in Australian general practice, accounting for 3.4 per 100 general practice encounters.² Trials have demonstrated that lowering cholesterol with statin therapy reduces both the progression of coronary artery disease (CAD) and mortality in patients with established CAD.^{3–4} When used in primary prevention, statins are cost effective and may reduce the relative risk of CVD mortality in patients at a high absolute risk of CVD.^{5,6} However, patient adherence to cholesterol lowering medication has been shown to be suboptimal.^{7–8}

Educational information sessions⁹ and telephone contact¹⁰ have been shown to enhance medication adherence and support advice that is given by general practitioners to patients. Doctors providing information about chronic disease can improve outcomes.¹¹ In an Australian study, increased education about type 2 diabetes improved patients' perceptions of the quality of the service they were receiving.¹²

Two of the key objectives of the draft Australian National Primary Health Care Strategy are health literacy and self management.¹³ Understanding patient perspectives is important to help target education and support toward patient needs. We aimed to investigate patients' knowledge, attitudes and experiences of their cholesterol medication and to explore views regarding programs to support self management.

Method

A purposive sampling method based on defined eligibility criteria was used to capture suitable 'information rich cases'¹⁴ with the cooperation of two South Australian practices (one urban and one rural) known to have an interest in research.

Eligible patients were aged 18 years or older, on statin medication for at least 12 months and poorly controlled (defined as a total cholesterol of ≥ 5.0 mmol/L and a low density lipoprotein of ≥ 3.1 mmol/L from two consecutive cholesterol readings). Two consecutive readings were required as this was considered to be able to potentially indicate poor adherence and exclude patients with isolated false positive high cholesterol readings.

A list of patients who met the above criteria was created through a search of each practice's electronic patient records. The patient's GP was then consulted to ensure patient suitability (including competency to consent and perceived capability to understand the complexities involved in cholesterol management). A final list of 124 (34 rural, 90 urban) eligible patients were invited to participate in the study via a mailed invitation that included a patient information sheet and consent form. A single mailout generated enough interviews to obtain data saturation.

A semistructured interview schedule was developed and included both open and closed questions under six broad themes.

- Knowledge about what causes high cholesterol
- Source and quality of information about cholesterol and its health effects
- Knowledge about how cholesterol medication works
- Knowledge about why patients are taking cholesterol medication

- Beliefs and concerns about patients' cholesterol medication
- Perceived usefulness of an information session about cholesterol and its health effects and/or nurse telephone follow up regarding long term medication taking.

Telephone interviews were conducted between December 2009 and January 2010. Each interview was digitally recorded. The tapes were independently transcribed verbatim. Analysis of the transcripts followed the template approach,^{15,16} applying the six a priori themes identified as important to the aims of the research question. The initial template was modified by two members of the research team in light of early findings to include newly emerging themes for subsequent interviews. Transcripts were analysed for content and theme. Interviews ceased when no new issues were emerging, suggesting data saturation.¹⁷ The research team revisited the data and agreed on the appropriateness of the final themes.

The study was approved by the University of Adelaide Human Research Ethics Committee.

Results

Thirty-six patients (of the 124 invited) responded to the initial mailout and consented to participate. Data saturation was reached after 26 patient interviews. Sociodemographic characteristics of the participants are presented in *Table 1*.

Knowledge of high cholesterol causes

Nearly all patients (92%, n=24) in this study reported at least one risk factor for their hyperlipidaemia, with family history (65%, n=17) and diet (46%, n=12) most commonly cited. Only one patient recognised the role of the liver as having an influence on cholesterol levels. A small number (n=2) said that they did not know what caused high cholesterol.

'I'm not quite sure. Maybe it's the food you eat.' (Female, aged 61–70 years)

'I really don't know a lot about it, but I figure it's something to do with the liver and I'm producing cholesterol which I'm not getting rid of somehow or another.' (Male, aged 61–70 years)

Table 1. Demographics of the 26 participating patients

Demographic	Number (%)
Gender	
Male	11 (42.3)
Female	15 (57.7)
Total	26 (100)
Age (years)	
41–50	2 (7.7)
51–60	6 (23.1)
61–70	18 (69.2)
Total	26 (100)
Highest qualification	
Primary education	2 (7.7)
High school education	19 (73.1)
Certificate/diploma level	5 (19.2)
Total	26 (100)
Geographic location	
Urban	18 (69.2)
Rural	8 (30.8)
Total	26 (100)
Duration on cholesterol lowering medication	
1–5 years	7 (26.9)
6–10 years	11 (42.3)
11–15 years	5 (19.2)
16+ years	3 (11.5)
Total	26 (100)

Source and quality of information

The vast majority of patients (96%, n=25) reported that their GP was the main source of information regarding cholesterol and its health effects. A majority (69%, n=18) of patients were satisfied with the information they had received but a considerable minority (31%, n=8) wanted more information.

Knowledge about how cholesterol medication works

Most (69%, n=18) patients reported not knowing how cholesterol medication works.

'That I've got no idea. It's something that probably baffled me and I've never asked the question, but I take a pill everyday.' (Male, aged 51–60 years)

'I don't know whether it works on your liver or what. I just don't know how it works.' (Female, aged 61–70 years)

Knowledge on why they were taking cholesterol medication

A Likert scale was used to measure patient understanding about why they are taking cholesterol medication. Most (62%, n=16) patients self reported that they fully understood the reasons they were taking cholesterol medication; however, many (30%, n=8) reported not fully understanding. One patient reported that they did not understand at all and one patient did not answer this question.

'After you've been on it a while they treat you a bit blasé. It's yes, you're on medication for the rest of your life, blah, blah, blah.' (Male, aged 61–70 years, who fully understood)

'No, I just take it everyday... and to be honest with you, I don't think about it any more.' (Female, aged 51–60, who did not understand at all)

One patient spoke of their trust in their GP and said that if their GP had recommended taking the medication then that meant they should continue. Another patient reported that it was not necessary to know how their cholesterol medication worked. Other patients who said they fully understood the reasons for taking their medication could not recall the information given to them, citing the length of time since the initial diagnosis as the reason for this.

Beliefs and concerns

All patients believed that they needed to take their cholesterol medication regularly but over half (58%, n=15) of all patients reported forgetting to take their medication, and about one-quarter (23%, n=6) intentionally missed out a dose on occasion or stopped taking it for a while.

Patients taking medication for ≤5 years were less likely to report forgetting to take their medication compared to patients diagnosed ≥6 years (29% compared to 68%). Sixty-two percent (10/16) of the patient group who reported 'fully understanding' the reasons for taking their medication reported that they intentionally missed or altered a dose, whereas this was only 50% (4/8) in those who 'didn't fully understand', and no patient who 'didn't understand at all' reported such behaviour.

Patient responses to questions about the hardest aspect of having high cholesterol varied and included the symptomless nature of the condition, concerns about unknown consequences

of taking the medication long term and difficulties modifying an established lifestyle.

'I don't really feel it. It's something that you don't really know you've got, do you.' (Male, aged 61–70 years)

'Well I'm introducing some chemical and I don't know what the side effects of it are.' (Male, aged 61–70 years)

'I suppose it's one of these trust things but you do wonder about anything you take long term, whether or not – because I know it is tied up with your liver. You know, if the bomb doesn't get you the fallout must – it would be terrible if I got to 76 and got liver failure because I'd been taking the cholesterol tablets.' (Female, aged 61–70 years)

Education programs for self management

A majority (69%, n=18) of patients thought an information session at their local general practice about cholesterol, its risk factors and medication would be beneficial.

'I think it would be beneficial not only for me but a lot of people my age... sometimes if you're not listening you don't hear about all the advances with new information coming out.' (Female, aged 61–70 years)

'Just my desire to be well informed about the condition I have.' (Male, aged 61–70 years)

Three patients indicated they were not interested in education sessions and five were uncertain.

'I don't think there's anything left for me to learn about it.' (Male, aged 61–70 years)

Patients were also asked whether they would find a telephone call from the practice nurse about their cholesterol test result and medication useful. While a minority (35%, n=9) indicated they would find this helpful, the same number indicated they would not, and 23% (n=6) were uncertain. Two patients did not answer this question.

'Anything really that improves the quality of life.' (Female, aged 61–70 years)

'Very important for me... the nurse to ring up and say, look, your cholesterol has not changed and it's recommended that you keep taking them.' (Female, aged 61–70 years)

Patients who stated they did not favour the telephone call from the nurse (n=9) preferred to

receive this information from their GP.

'No, because I can't adjust the dose, I can't change anything, it has to come through the GP.' (Female, aged 61–70 years)

There was no evidence to suggest that results differed between rural and urban practices.

Discussion

This study of patients with hyperlipidaemia has identified several important issues. Although most patients could identify what causes hyperlipidaemia, the majority of patients did not understand how their cholesterol lowering medication worked. It is possible that these gaps in understanding are more attributable to a lack of provision of appropriate education than the comprehension ability of the participants (given that they were deemed capable of understanding by their GPs). Research has shown that when patients fully understand the importance of medication adherence for their long term health there is often an improvement in their adherence.¹⁸

General practitioners were identified as the key source of information about cholesterol and its health effects, with the majority but not all patients satisfied with the information they had received. This is in line with other research¹⁹ which suggests that many patients report that their doctor infrequently discusses treatment options or involves them in their care. One patient described continuing to take long term medication 'on trust'. Public trust in Australian GPs remains relatively high²⁰ although there is growing expectation that this should be earned.²¹ In patients for whom trust of the GP is a large factor sustaining adherence, providing them with more information may still be useful to strengthen and sustain that trust.

All patients in this study were aware of the importance of taking their medication regularly, but problems with adherence were common, occurring particularly in patients who were on a medication for ≥ 6 years. Missed or altered doses also occurred in over half of those patients who said they fully understood the reasons for taking their medication. This is of concern given the potential for reduced efficacy or adverse events from nonadherence. However, it is important to note that this finding may be related to the sampling framework of this study (which selected

for those who were poorly controlled) and may not be generalisable to all patients on long term statin therapy.

Some patients spoke of their concern about the possible long term side effects of taking cholesterol medication but felt that the benefit outweighed the risk. Interestingly, it was the patients who reported that they fully understood the reasons why they were taking cholesterol medication who were particularly concerned about the potential long term side effects.

Most patients in this study were interested in GP based education programs on cholesterol, its risk factors and medication. These patients felt that this would provide an opportunity for them to stay informed about new research and treatments. They wanted information about their condition and to be able to ask questions. Importantly, patients in this study were volunteers, which may indicate a prior interest in research, so their views may not be representative of all patients on statins. However, this desire for more information reflects an increasing recognition that consumers want a say in the decisions that affect their health.²² Active participation in healthcare requires an understanding of the condition, the treatments available and the expected outcomes.²³ This study suggests that targeted education programs in general practice may be a useful way to appropriately educate patients.

Limitations of the study

There are several limitations of this study. First, medication adherence is a complex issue. Patient knowledge and understanding is only one contributing factor. Others include number and cost of medication, duration of disease and patient attitudes, beliefs and perceptions relating to illness.²⁴ Second, given the sample was taken from practices with an interest in research, the findings may not be representative of other Australian general practices. For example, these practices may have been aware of evidence concerning patient adherence and would therefore be more likely to take steps to address these in practice. Similarly, patients were purposely selected according to criteria which made them 'information rich' volunteers with poorly controlled cholesterol, so they are not representative of all patients on long term statin therapy.

Summary of important points

- Patients on long term statin therapy may have gaps in their knowledge about their condition and treatment options, and most have a desire to be better informed.
- Even when patients report fully understanding their condition and medication, reported adherence may be suboptimal.
- Educational information sessions at a local general practice clinic may be acceptable and potentially beneficial.

Conclusion

Despite its limitations, this study provides preliminary evidence that patients on long term statin therapy may have gaps in their knowledge about their condition and treatment options and desire to be better informed. Further research should be directed at further assessing the educational needs of patients on long term statin therapy and the best way to deliver this information.

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