Patient Education in Chronic Arthritis

Ying-Ying Leung, Peter King-Kong Poon, Edmund Kwok-Ming Li

Abstract: Patient education is an integral part of the management of chronic arthritis. The concept of patient empowerment and self-management enable desirable adaptation to chronic illness and adherence to treatment. Arthritis patient education takes different forms including printed notes, individual or group counseling and even the Internet. Efforts have been made to evaluate the effectiveness of patient education program. Structured educational program have demonstrated efficacy at least in the short term, in improving patient knowledge, reducing symptoms, increasing self-efficacy and promoting desirable health behavior. More controversies have been on the long term and sustainable benefits. There are rooms for improvement in the implementation of these educational opportunities.

Keywords: Patient education, rheumatoid arthritis, osteoarthritis

Introduction

Patient education is an integral part in the management of chronic arthritis in adjunct to standard pharmacological treatment. Chronic arthritis like rheumatoid arthritis (RA), ankylosing spondylitis (AS), psoriatic arthritis (PsA) and osteoarthritis (OA) can produce ongoing symptoms like pain and stiffness; limitation in function physically, psychologically and socially. It is essential for patients to understand the process involved and the importance of treatment.

The Concept of Self-Management

One of the central emphases of education modalities is "Patient Self Management". Similar terms that describe this concept are collaboration management, shared responsibility and patient empowerment, etc. It is defined as individuals undertaking tasks to live well with their own chronic illness. These tasks include gaining confidence to deal with medical management, role management and emotional management, so as to improve their health status and health care utilization. (Table 1)
Types and Methods of Patient Education

Center with the concept of patient education are what type of education, what is the context, who is providing the education. In addition, what is the efficacy of patient education, what outcome parameters are we looking at, and other methodology problems like having a control group, blinding and the adjustment of confounding factors.

Form of Education

Patient education may be conducted in both clinical and community settings. They could come with different forms like printed noted (FACT sheets/booklets), individual education, small group counseling and even using the Internet.

More organized patient educational programs have been popular in the past decade. One of the prototype is that developed from the Stanford Education group, the "Arthritis Self-Management Program (ASMP)". This course runs for 2.5 hours per week over 6 weeks and is led by peers or health professionals. The content of the course is summarized in Table 2. The most important concept underlying this program and similar ones is self-confidence or self-efficacy that patients have. The whole concept of education is to improve patients confidence, which links one’s knowledge to actually making changes and adaptation in daily life as to live well with chronic illness. In Hong Kong, the Community Rehabilitation Network of the Hong Kong Society of Rehabilitation is a licensed provider of the course in the community setting. Regular courses are carried out in their 6 community centers throughout the territories.

Evidence of Effectiveness of Self-management Program

Lorig et al has recognized the importance of evidence base from early on. Their group reviewed 76 out-patient educational programs and found that 94% of 34 programs demonstrated an improvement in patient knowledge; 77% of 44 programs showed an increase in desirable behavior such as relaxation, exercise or medication compliance. In a meta-analysis of 15 controlled trials on psychoeducation intervention in chronic arthritis, there were improvement in pain (16%), depression (22%), and disability (8%) over the control group. Warsi et al performed a meta-analysis on 17 controlled trials on arthritis self management programs. The authors limited the evaluation to the effects of pain and disability, the magnitude of effects were converted to a common measure namely the effect size. The summary effect sizes estimate was 0.12 for pain and 0.07 for disability. According to Cohen’s classification of effect sizes, effect sizes <0.2 are considered small, between 0.25-0.5 moderate and >0.5 large. These suggested that arthritis self-management programs results in small but significant reduction in pain and disability.

The best piece of evidence comes from the Cochrane Database of Systemic Reviews. Riemmsma et al reviewed the effects of 31 controlled trials on patient education for adults with rheumatoid arthritis. The education program included should contain an instructional component on ways to manage

Table 1. Core concepts of patient self-management

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<th>Concepts</th>
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<td>Engagement of activities that promote health, build physiological reserve and prevent adverse sequelae</td>
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<td>Management of the effects and be able to function in social roles; manage emotion and self-esteem and manage relationships with others.</td>
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<td>Interaction with health care providers and adhere to treatments</td>
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<td>Monitor physical and emotional status, and to make appropriate management decision</td>
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Table 2. Content of the 6-week Stanford University Arthritis Self-Management Program

<table>
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<th>Concepts</th>
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<tr>
<td>Techniques to deal with pain and fatigue</td>
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<tr>
<td>Managing anger, fear, frustration and isolation</td>
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<tr>
<td>Appropriate exercise to improve and maintain strength, flexibility, and endurance</td>
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<tr>
<td>Understanding medication use</td>
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<td>Effective communication with family, friends, and health professionals</td>
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<td>Solving health-related problems and action planning</td>
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arthritis symptoms. At first follow up, significant effects of patient education were demonstrated for scores on disability, joint counts, patient global assessment, psychological status and depression. A trend favoring patient education was shown for pain scores. Anxiety and disease activity had no significant effects. At final follow up (3-18 months) no significant effects of patient education were found, although there was a trend favoring patient education for scores on disability. The authors concluded that Patient education had small short-term effects on disability, joint counts, patient global assessment, psychological status and depression.

Peer Leaders and Patient Partners

Patient partners are patients with chronic arthritis who have been trained to teach medical students, doctors and allied health staff on various aspects of arthritis. They are found to be as effective as doctors in teaching medical students about musculoskeletal examination. These patient partners can also play a valuable role in educating patients about their disease. Trained "Lay Leaders" has been incorporated into the Arthritis Self-Management Program. Each session of the program were led by one professional and one trained lay leader. It was proven to be as effective as those led by professionals. A meta-analysis on 17 randomized trials on lay-led self-management education program revealed small, short-term improvements in self-efficacy, self-rated health, cognitive symptom management, and frequency of aerobic exercise. Participation as lay leaders has positive effect on the leaders themselves. A small study revealing significant increases in self-efficacy, cognitive symptom management, communication with their physician and a small, significant decrease in depressed mood. The results were supported by qualitative study.

The Internet

Access to the Internet has become readily available. Patients are increasingly seeking and obtaining health information through the Internet. There is a large amount of accurate information about arthritis on the Internet. The Hong Kong Arthritis & Rheumatism Foundation has also developed educational websites where materials displayed has been reviewed by experts for its accuracy and appropriateness. Among 257 arthritis patients surveyed in a Korean study, 28% reported that they searched for arthritis information on the web. The parameters significantly associated with Internet searching were a younger age, being employed, and having a higher income and a higher education.

Educational Program has also been provided online. Lorig et al evaluated prospectively the effectiveness of an online self-management program (EPP Online) in US, which is an asynchronous 6-week lay-led chronic-disease self-management program offered online. It demonstrated significant improvement in health status, health behavior, self-efficacy and satisfaction with the health care system and reducing health care utilization up to 1 year. Similar symptoms reduction and health behaviors improvement were demonstrated in an EPP online program for people with chronic illness in UK. There were also significant increase in self-efficacy and satisfaction in health care. More specifically to arthritis, the effectiveness of internet-based ASMP was studied in RA, OA and fibromyalgia. At one year, the intervention group significantly improved in 4 of 6 health status measures and self efficacy. No significant difference in health behavior or health care utilization was shown. This study recruited patients who were not willing to join the small group ASMP and may be a viable alternative to the small group ASMP.

However, material posted on the Internet is uncensored. Patient may also be exposed to inaccurate information. Suarez-Almozor et al conducted a study on surfing the Internet for information about rheumatoid arthritis. They tried to replicate use by an average person conducting a broad search of the Internet for the phrase "rheumatoid arthritis" using WebCrawler, a commonly used search engine. Of a total of 531 'hits' obtained from 388 websites, only 51% were considered to be relevant. Seventeen percent were posted by an individual, 28% by a nonprofit organization, 51% by a profit industry, and only 5% by universities. Of the 107 sites with financial interests, 71% promoted alternative medicine. About half of the websites that discussed conventional therapies also had financial aims such as advertising or selling products. Among the 138 websites searched in the Korean study mentioned, 18.8% were classified as advertisement and 44.9% as having financial interests. Only 16.1% of physicians responded that their patients understand the Internet content accurately. The Internet offered mixed blessing for patient education and there is a need for critical evaluation of the health information on the web.
Limitation of Patient Education

The value of educational program specifically designed for patients with chronic arthritis has been established, at least in the short term. However, there are several limitations. Firstly, many studies in this area were based on small sample size. They usually involve voluntary patients who tend to be better educated and motivated, making the results may or may not be generalized to the wider community of arthritis patients. Studies did not always use reliable, validated outcome measures. Only a limited number of studies have a valid control group and there are difficulties in conducting these studies in a double-blinded manner. Most controlled trials randomize patients to a wait-list control group who receive the intervention 4-6 months later, and thus had only a short follow up periods (<6 months). Only a few had longer follow up of more than years and demonstrated dilution of the short term benefits with time.16-20 There will be pressure from funding agencies in demanding the evidence of cost-effectiveness of different forms of educational programs. The cost effectiveness evidence of a self-management program for chronic disease in general (rather than chronic arthritis alone) in UK has been published.21,22 Although the quality adjusted life years gained are small in absolute terms, the author conclude that the program is likely to provide a cost effective alternative to usual care in people with long-term conditions.

Summary

Patient education program have become an accepted part of management in patients with chronic arthritis. Patients with chronic arthritis have complex and continuing needs that the acute healthcare approach could not address all their needs. Many patients underestimate the value of active participation in their own health while clinicians underestimate the value of education in patient compliance. Self-management and patient education principles have the potential to militate on these problems. There is good scientific evidence for a modest effect of these programs in improving patient knowledge on their illness, reducing symptoms including pain, disability and depression; and changing health behavior. The most likely setting in which arthritis patient education is reaching patients in need is the consultation with physicians and allied health staff. However, achieving engagement of patients, clinicians and organizations with self-management programs have been challenging. There are many area to which these educational programs be better implemented.

References

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