Patient Expectations Of Hip And Knee Joint Replacement Surgery and Three Month Post-Operative Health Status

Introduction

Total joint replacement surgery for end-stage osteoarthritis is an ideal disorder in which to investigate the role of patient expectations. Osteoarthritis, while not life threatening, has a substantial impact on the quality of life of sufferers and total joint replacement surgery for osteoarthritis is an elective procedure.

It is commonly the expectations of patients that bring them to medical practitioners for treatment of their arthritis. The experiences of others such as family or friends in a similar situation may influence an individual’s expectations. In the case of joint replacement surgery, surgeons and other health professionals such as physiotherapists also play a role in determining patients’ expectations. Expectations allow patients to establish incremental goals which are attainable and to develop support strategies to get them through the initial post-operative period. As these minor goals are achieved, confidence and self-efficacy improves, enabling them to persevere and achieve greater functional outcomes. Patients with unrealistic expectations might become discouraged and fail to reach their potential.

There is a lack of uniformity in how expectations are measured and no standardised measure has been employed. Studies of expectations of joint replacement most often utilise simple yes/no responses to questions written for the individual study, or open-ended questions that take considerable time for the patient to complete and pose challenges for later coding of responses. Generalised expectations for joint replacement surgery have been shown to be significant predictors of who benefited most from the knee replacement surgery, accounting for more than 10% of the variance in physical health improvements. Mancuso and colleagues at the Hospital for Special Surgery, developed questionnaires to assess the expectations of total hip replacement surgery, and total knee replacement surgery. The questions address symptom-related functional and psychosocial expectations, and are discussed further below. Mancuso’s work demonstrated that patients have multiple expectations of knee surgery.

Our aim for this study was to look at the relationship between patient’s pre-operative expectations of patients and three-month post-operative health status.

Methods

Patients booked for total hip or knee replacement at 3 Sydney hospitals during 2005 and 2006 were recruited. Both public and private patients were included. At the pre-admission clinics participants were given questionnaires to complete which included the Hospital for Special Surgery Hip Replacement or Knee replacement Expectations questionnaire, the WOMAC Index, which measures arthritis-related pain, stiffness and function, and the SF-36 which is a generic health status measure. At three months post-surgery the WOMAC Index and the SF-36 questionnaire were mailed to participants.
HSS Expectations Questionnaires

A team at the Hospital for Special Surgery in New York have developed patient expectations questionnaires that address the multiple expectations patients have. The hip questionnaire was developed first using open-ended responses with joint replacement patients then the resulting questionnaire they developed was validated with another group and it was also shown to be reliable\(^3\). Using a similar methodology, the knee replacement expectations questionnaire was developed\(^4\).

The HSS Hip Replacement Expectations Questionnaire asks patients to record how important each of a list of expectations are to them. There are 18 questions which cover a spectrum of expectations such as pain relief, improvement in walking, improvement in daily activities, social activities, psychological wellbeing and other types of mobility. For each question patients rate how important that is to them on the scale of Very important down to I don’t expect this or This doesn’t apply to me. The Knee Replacement Expectations questionnaire has a similar structure, but the questions are more relevant to knee patients, such as the ability to kneel. Both the hip and knee expectations questionnaires are recoded so a higher score indicates it is more important. A score of 2 or more indicates the factor is “important” to patients. These questionnaires are shown in Slides 5 to 8.

Results: Hips

We analysed the data from 30 THR patients who had completed the questionnaires pre-op and 3 months post op. These patients improved significantly from pre to post surgery in WOMAC pain, stiffness and function and in the physical scales of the SF-36. Not surprisingly, 90% rated improvement in the ability to walk as Very Important and 87% rated improvement in daytime pain as Very Important.

The hip questionnaire had 18 questions – these hip patients reported a mean number of 14 expectations – where they indicated that the factor was Very important or Important to them. The average “Importance” score was 41.8 from a possible range of 0 to 54, suggesting that most of the factors were fairly important for patients.

Slide 15 shows the mean responses for each of the expectations questions for this group. A score of 2 or more indicates that factor is “important” to patients. The pink bars on this graph are from all respondents and we found that employment seemed to not be important to patients – in this age group this is to be expected. We also looked at the responses of patients who said the factors were important – ie we excluded those who said it did not apply to them – of these all the factors in the questionnaire were considered “important”.

Correlations between the number of expectations and their pre- and post-operative WOMAC scores were examined. Pre-surgery these were not statistically significant. Using the improvement in WOMAC scores from pre- to post-surgery, a moderate correlation was found for pain. This suggests that a smaller improvement in post-operative pain was associated with a greater number of pre-operative expectations of surgery. Pre-surgery the number of expectations was significantly correlated with some scales of the SF-36. Some scales were also significantly associated with importance of expectations. Correlations with improvement to 3 months post-op suggest that a greater number of expectations were associated with a smaller improvement in pain.

Results: Knees

Data was obtained from 79 total knee replacement patients. This group of patients improved significantly from pre to post surgery in WOMAC pain, stiffness and function and in the physical scales of the SF-36.
On the expectations questionnaire, 93% rated the improvement in the ability to walk as Very important and 89% rated relief of pain as Very important. These patients had a mean number of 14 expectations from a possible 17 and a mean ‘importance’ score of 38 from a possible 51, again suggesting that most of the factors are important to patients.

Slide 19 shows the factors that make up the Knee Expectations Questionnaire and the responses from these TKR patients. The pink bars are from all patients and blue bars excluded those who indicated the question did not apply to them. Again, employment was not so important to these respondents. Squatting and improvement in sexual activity were not so important to these respondents, while improvement in pain and walking ability, including stairs, were important.

As with the THR patients, we looked at the correlations between the WOMAC Index and Number of expectations and importance scores. No significant correlations were seen either pre-surgery or in improvement in health status to 3 months post-surgery. Correlations between the number and importance of expectations and SF-36 scores pre and post-surgery suggest that a greater number of expectations was associated with worse general health. Greater pain was associated with a higher rating of importance of expectations. So for knee replacement patients we did not find the same influence of expectations on post-op pain that we saw for hip replacement patients.

**Conclusions**

- Not surprisingly, patients have high expectations of this elective surgery, in particular improvement in the ability to walk and the relief of pain.
- What is perhaps surprising is that a higher number of expectations was associated with less improvement in pain for hip patients. This is an area we are working on – looking at looking at differences in types of expectations amongst different groups, such as males and females, older and younger and those with different living situations.
- Its important to identify the range of patient expectations for joint replacement surgery and identifying these may be helpful in preparation for surgery and gaining better outcomes, particularly those that are important to patients.

**References**


