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A review of patient's expectations and outcome following total knee arthroplasty

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ABSTRACT

Patient's expectations are variably reported to influence functional outcome and satisfaction after total knee arthroplasty. 154 patients with osteoarthritis of the knee were subjected to a questionnaire on their expectations of surgery in terms of expected time of recovery, expected pain after recovery, and expected limitations in everyday activities. Post operatively patients were followed to evaluate outcome both clinically and functionally using knee society clinical and functional scoring system. Correlation of pre operative expectations to post operative outcome was assessed and parameters of expectation analysed. Patients significantly underestimated the time for full recovery (expected 1.2 ± 0.6 months, recalled actual time is 2.7 ± 0.7 months; $P = 0.005$). They were also overly optimistic about the likelihood of being pain-free (98% expected it, 63% were; $P < 0.005$) and of not being limited in usual activities (82% expected it, 59% were; $P < 0.005$). The overall satisfaction post operatively at 1 year follow up was 61% as evaluated in terms of variants – pain, recovery, limiting activities. Pre operative expectations met the satisfactory levels at follow up in Hi Flex designs (69%) as to only 52.8% in others. Pre operative expectations did not meet the satisfactory levels in cases of Rheumatoid arthritis. The impact of patient expectations on satisfaction is profound. It would be better for orthopaedic surgeons and patients to discuss expectations before the surgery to assure that these are realistic.

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1. Introduction

Total knee arthroplasty has revolutionized the care of patients with end-stage knee arthritis. Expectation is defined as patient's anticipation of events like pain, capability of performing activities and recovery following the surgery [1]. Expectation do variably influence self-rated outcome i.e. satisfaction after surgery.[2] The outcome of total knee arthroplasty should be assessed not only on the basis of imaging, technical results, and objective functional findings, but also in relation to the patient's perception of the satisfaction gained.[3,4] The present study seeks to expand our knowledge of the relationship between expectations, outcome and satisfaction of patients following knee arthroplasty.

Methodology:

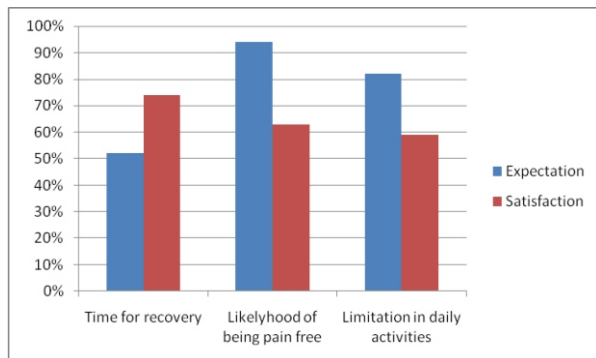
This study included 154 patients undergoing total knee arthroplasty at our centre from 2008 to 2014 for primary and secondary osteoarthritis of knee. Revision procedures were excluded. All of them underwent Posterior Cruciate stabilising design prosthetic replacement without patellar resurfacing. Pre-operative counselling about financial expenditure, procedure and outcomes following surgery was given to all the patients. A standard post operative protocol of rehabilitation was followed. Pre-operatively, patients were subjected to a questionnaire on their expectations of surgery in terms of expected time of recovery, expected pain after recovery, and expected limitations in everyday

activities. Expectation levels were calculated using a Likert scale[5] of 0 to 4 points as follows: 'very important' (4 points), 'somewhat important' (3); 'slightly important' (2); 'I do not expect this' (1); and 'this does not apply to me' (0). Summing up the points, responses were dichotomised in to high expectation group (>6 points) and low expectation group (≤ 6 points). Post operatively patients were followed to evaluate outcome both clinically and functionally using knee society clinical and functional scoring system at 6th and 12th months. At 12 months, in addition to these scores, satisfaction was measured on a 2 point scale – Satisfied or Dissatisfied for each of the expected entities.

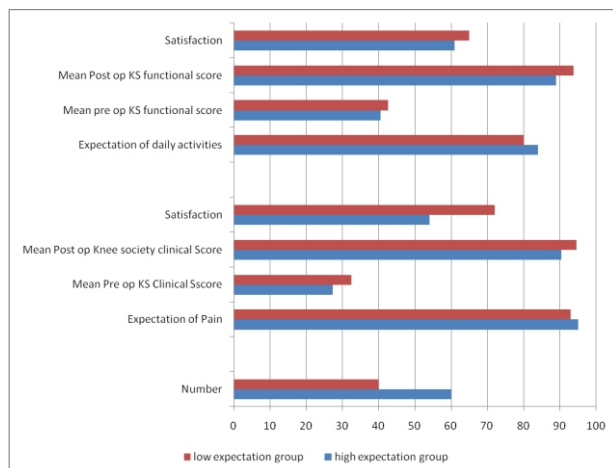
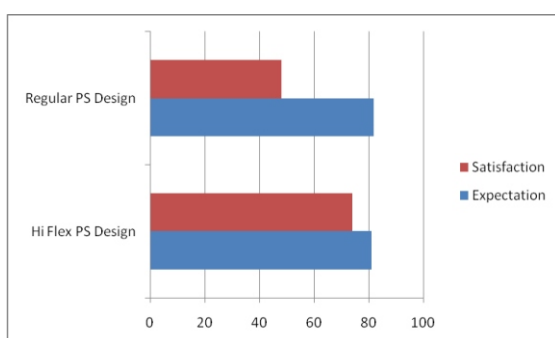
RESULTS:

Of the 154 patients, 70 were males and 84 were females with mean age of 63.8 years (54-78 years). 84 were treated with Hi-flex PS design and rest with normal PS design prosthesis. 54 (66.7%) of the 81 elderly people above 65 years of age had high expectations from surgery. Females (67%), low education group (72%) and those with no existing co-morbidities had high expectations. Patients significantly underestimated the time for full recovery (expected 1.2 ± 0.6 months, recalled actual time is 2.7 ± 0.7 months; $P = 0.005$). They were also overly optimistic about the likelihood of being pain-free (94% expected it, 63% were; $P < 0.005$) and of not being limited in usual activities (82% expected it, 59% were; $P < 0.005$). (Fig 1)

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Fig 1 : Comparision of expectation and satisfaction levels in variables analysed

The overall satisfaction post operatively at 1 year follow up was 67% as evaluated in terms of variants – pain, recovery, limiting activities. Pre operative expectations met the satisfactory levels at follow up in Hi Flex PS designs in 76% patients as to only 57.8% in the rest of patients with PS prosthesis. In 15 cases of rheumatoid arthritis expectations did not meet satisfaction in 10 (66.7%) among them. 123 (80%) of them wanted to undergo the procedure when indicated by surgeon on the contralateral side and 135 (89%) of them recommend the procedure to their family and friends.

Figure 2 : Graph showing Satisfaction and Expectation levels of the two expectation groups in conjunction with functional outcome measured by Knee society scoring system.**Figure 3 : Graph depicting expectation and satisfaction levels among both the implants.**

Discussion:

Expectations of surgery have sociodemographic predilection[5]. Elderly population, females, patients without comorbidities and those with lower level of education and low income tended to expect better outcomes. Expectations have a high negative correlation with objective satisfactory levels, and no relation with clinical and functional outcomes. In our study, pain and functional outcome scores were better for patients who had low expectations, but does not constitute significance statistically by the time of followup.

Hi Flex PS designs catering more range of post operative knee flexion not only had significant functional outcome but also had higher satisfactory rates among the patients. Rheumatoid arthritis patients had good clinical and functional outcome but poor satisfactory rates perhaps owing to ongoing disease pathology in other joints.

There is significant dissatisfaction among patients with good outcome as assessed by the surgeon. Perhaps, expectations had greater influence on satisfaction among them.

CONCLUSION:

Patient expectations of surgery are generally overly optimistic. This highlights the need for discussing and counselling the patients about different outcome domains prior to the surgery.

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