A prospective review of appetite loss and recovery time in primary joint replacement patients

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ABSTRACT

INTRODUCTION Appetite loss is commonly reported by patients following major surgery, including total joint arthroplasty (TJA). A number of studies have examined related problems, particularly in relation to physiological responses to surgery. However, no published paper has looked specifically at the duration of appetite loss in total knee arthroplasty (TKA) and total hip arthroplasty (THA) patients.

METHODS A simple, established appetite screening tool was administered preoperatively and at 2-week intervals postoperatively in 50 TJA patients until appetite levels returned to preoperative levels. The results were examined for various descriptive parameters and compared using the chi-squared test.

RESULTS Thirty-three patients underwent TKA and 17 THA. There were 27 female and 23 male patients. No patients were lost to follow-up. The median time for return of appetite in both male and female patients was 4 weeks (interquartile range [IQR]: male, 2–4; female, 4–6). The median time for return of appetite was 4 weeks both in TKA patients (IQR 4–6) and in those undergoing THA (IQR 4–4). The time to return of appetite was not significantly associated with either the gender of the patients ($p=0.13$) or the type of joint replacement ($p=0.49$).

CONCLUSIONS The study provides a clear time frame for return of appetite in uncomplicated primary joint replacements. This is a commonly noted patient problem that has not previously been specifically reviewed.

KEYWORDS

Arthroplasty – Appetite – Postoperative Period

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Postoperative fatigue is commonly reported following a range of major surgical procedures, usually as a self-limiting problem.^{1,2} Recent research suggests that this fatigue is related to both physiological and psychological factors, and often includes loss of appetite.³

Although postoperative appetite disturbance is frequently reported by orthopaedic patients, there are currently no publications investigating appetite loss and the time frame for return of appetite to baseline levels following uncomplicated joint replacement.

We reviewed appetite loss and its duration following total joint arthroplasty (TJA) by examining the time taken to return to preoperative appetite levels.

Methods

Consecutive primary patients undergoing TJA over a 4-month period were asked to participate. This resulted in 50 patients being recruited, with no patient declining. Each

patient was interviewed preoperatively and at two week postoperative intervals until their appetite returned to the preoperative level. Human research ethics committee approval was obtained from the Ipswich and West Moreton District Ethics Committee (approval number GC09/2007). Informed written consent was obtained.

The assessment tool used to measure appetite was the Simplified Nutritional Appetite Questionnaire (SNAQ),⁴ which is an easy-to-administer, validated tool that has four items, with 5 responses per item (1–5). Total scores are calculated as the sum of the 4 item responses, yielding a possible score range of 4–20. All subjects were asked to complete the SNAQ questionnaire at each assessment. Pre-operative scores were used as the baseline, with lower postoperative scores indicating a deterioration in appetite. The time to return to the preoperative appetite score was calculated for each patient.

Medians and interquartile ranges (IQR) are reported, as well as the number of patients who had returned to

Table 1 Time to return to normal (preoperative) appetite by gender and joint					
		Time (weeks)			Total
		2	4	6	
Sex	F	3	15	9	27
	M	8	10	5	23
Joint	Hip	4	10	3	17
	Knee	7	15	11	33
Total		11	25	14	50

preoperative appetite levels by each time point. Non-parametric analyses were performed using SPSS for Windows (version 16.0.0, SPSS Inc. Chicago, IL, USA).

Results

Twenty seven of the participants were female and 23 were male, and the average age was 68. Thirty three patients underwent total knee arthroplasty (TKA), including two sequential single anaesthetic bilateral TKAs, and 17 underwent total hip arthroplasty (THA). No patients were lost to follow up.

Varying degrees of postoperative appetite loss was experienced by 38 (76%) of the patients. The median time for return of appetite in both male and female patients was 4 weeks, at an IQR of 2–4 in males and 4–6 in females. By 4 weeks, preoperative levels of appetite had returned in 36 (72%) patients (Table 1). The median time for return of appetite in TKR patients was 4 weeks (IQR 4–6), and 4 weeks in THR patients (IQR 4–4). All patients returned to their preoperative appetite level by 6 weeks. Using the chi-squared test, there was no significant association between gender and the time of appetite return ($p=0.15$). Similarly, there was no significant association between joint replaced and the time to appetite return ($p=0.49$).

Eight patients experienced other complications, including anaemia, deep vein thrombosis, cellulitis tibia, lower respiratory tract infection and arrhythmias. There was no significant relationship between the occurrence of complications and the return of appetite.

Discussion

Our study shows that patients commonly experienced appetite loss after primary TKA and THA, which resolved

within 6 weeks. The duration of appetite loss did not vary significantly between genders or by the operation type, and appeared to be at least partially independent of the degree of surgical insult.

Although postoperative fatigue can be considered part of the normal recovery process, appetite loss can be a sign of other problems or serious underlying pathology. Clinical malnutrition has also been shown to be correlated with increased complication and mortality rates in surgical patients.⁵ Given the importance of nutrition on convalescence and recovery time, understanding the natural history of postoperative appetite loss is important for the surgeon.

The main limitation of our study is the small number of patients. As there were no previous papers on this question, it was difficult to undertake a power calculation. This paper should therefore be viewed as a pilot study, and could be used to calculate group sizes for future research. We estimate that to have a 70%–80% chance of detecting a significant difference between THR and TKR patients, 294 patients would be required for each group. By shortening the review interval to 1 week, it would be possible to define the duration of loss and the time need for appetite return more accurately.

Conclusions

The results of this study are important as they confirm the occurrence of appetite loss following uncomplicated primary joint replacements and suggest that other pathologies should be considered for appetite loss persisting beyond 6 weeks postoperatively. This can be used clinically to help monitor normal recovery and provide appropriate prognostic advice to patients.

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