Impact of Patient Education on Satisfaction, Anxiety, and Knowledge in Patients Undergoing Adductor Canal Blocks

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Background

The adductor canal block (ACB) is primarily a sensory nerve block with maximal motor-sparing effect that offers significant post-operative pain relief and allows patients to undergo early physical therapy after total knee arthroplasty (TKA). Despite discussing evidence of improved outcomes of TKAs with ACB preoperatively, patients still voiced concerns of anxiety and lack of understanding regarding the benefits and risks of the block.

Patient education improves patient satisfaction and understanding of anesthesia prior to surgery. Studies have shown that patient education improves satisfaction in patients with pain, and video-based teaching leads to decreased anxiety and increased knowledge in patients undergoing other procedures such as a colonoscopy. We developed and implemented a quality improvement intervention using a shared decision making (SDM) aid in the form of a video. The primary outcome was to increase patient knowledge about ACB. The secondary outcomes were to reduce patient anxiety about the block and to increase patient satisfaction.

Materials and Methods

The quality improvement (QI) educational intervention was assessed on patients undergoing TKA from October 2020 to March 2021. The study was approved by the department’s QI Committee. Two brief surveys were administered prior to surgery.

- First survey incorporated 8 questions and was completed by the patient prior to watching our educational video.
- Second survey included 9 questions and was presented to the patient after watching the video.

Knowledge scores - ACB knowledge-related true-and-false questions were asked in both pre and post surveys. Differences in pre/post knowledge scores were assessed using Wilcoxon Signed Rank (paired) test at the p<0.05 level of significance.

Anxiety and Satisfaction: Additional Likert scale style questions related to anxiety and satisfaction were included.

The surveys and video were uploaded to a 10.2 inch tablet and prompts were included to ensure patients completed the secondary portion of the survey. Patients completed the educational intervention immediately prior to the block in the pre-surgical area where the block was performed.

Results

A total of 56 pre/post surveys were completed. Average time for watching the video (~7 minutes) and completing the surveys (~5 minutes) was ~12 minutes. Table 1 shows patient demographics, and pre and post video knowledge scores by group, and the difference between pre and post scores.

![Image of Table 1 showing patient demographics and pre/post knowledge scores](image)

![Image of Figure 1A: Patient Knowledge Scores](image)

![Image of Figure 1B: Post Video Response - Anxiety](image)

![Image of Figure 1C: Post Video Response - Patient Satisfaction](image)

Discussion

In this QI intervention, we developed a video based educational tool to help patients better understand the benefits of receiving an ACB.

- Results showed a significant increase in patient knowledge. Importantly, all age, sex, and education groups showed a numeric improvement in knowledge scores. This may indicate that our video could be used to increase education about ACB across varying patient populations.
- The majority of patients (64%) agreed that the video helped reduce their anxiety. However, the video also showed the extent to which the pre-operative anxiety might be reduced. Secondary studies have demonstrated that pre-operative anxiety is associated with post-operative pain and poor outcomes. Therefore, this may be a time-efficient strategy to reduce poor outcomes, but additional work would be necessary to explore this association.
- A great majority of patients (93%) expressed satisfaction with the education provided in the video. Our future goal is to adopt this educational video as part of the pre-operative preparation materials for all patients undergoing a TKA procedure.

References