Video Informed Consent Improves Knee Arthroscopy Patient Comprehension

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Purpose: The purpose of this study was to test the hypothesis that video informed consent improves knee arthroscopy patient comprehension and satisfaction compared with traditional verbal informed consent. **Type of Study:** Prospective, randomized controlled trial. **Methods:** Consecutive patients having informed consent in preparation for knee arthroscopy by a single surgeon were stratified by educational level ≤12th grade or greater than 12th grade, then randomized to video or traditional verbal informed consent groups. Immediately after the informed consent process, patients completed an outcome questionnaire evaluating comprehension and satisfaction. **Results:** Patients in the video group showed significantly higher comprehension (78.5%) than patients in the verbal group (65.4%) ($P = .00001$). In the subgroup with ≤12th grade education level, the video patients scored 73.1% comprehension and the verbal patients only 54.2% ($P = .0011$). In the subgroup with greater than 12th grade education level, the video patients scored 82.3% and the verbal patients scored 72.2% ($P = .0002$). There was no significant difference in subjective self-assessment of satisfaction between groups. **Conclusions:** Video informed consent improves knee arthroscopy patient comprehension compared with traditional verbal informed consent. **Level of Evidence:** Level I. **Key Words:** Consent—Knee arthroscopy—Video—Comprehension—Education.

From the teachings of Plato in the fourth century BC,[1] through the teachings of the American Academy of Orthopaedic surgeons today,[2] the process of informed consent has been well defined. Still, however, deficiencies in orthopaedists' understanding and abilities regarding informed consent exist.[3]

"Patients don't understand what doctors are saying."[4] Most patients do not understand,[5] recall,[6] or even read[6] the consent form. Whether communicating verbally[4] or in writing,[4,7] physicians communicate at a level far beyond the comprehension of most patients. Problems with informed consent are consistently found in malpractice claims against orthopaedic surgeons.[8] The purpose of this study was to test the hypothesis that video informed consent improves knee arthroscopy patient comprehension and satisfaction compared with traditional verbal informed consent.

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METHODS

After Institutional Review Board approval, a prospective, randomized controlled trial comparing verbal informed consent and video informed consent was initiated. Data were collected for the following patient demographic criteria: age, gender, race, and highest level of education obtained.

Included in the study were patients scheduled for knee arthroscopy by a single surgeon (J.H.L.) on whom the following procedures were anticipated: partial meniscectomy or meniscal repair, chondroplasty, synovectomy, debridement, loose body removal, or lateral retinacular release (inclusion criteria). Excluded were patients in whom cruciate or patellofemoral ligament reconstructive surgery or open knee surgery was planned, patients younger than 18 years,

patients unable to comprehend written or spoken English, patients with a history of open or arthroscopic knee surgery, and medical or paramedical personnel with specific professional knowledge of knee arthroscopy (exclusion criteria).

All patients who met the criteria for inclusion were identified by the operating surgeon who told the patients that they were to move to the Patient Education Room where an assistant would explain the procedure in detail and answer all of their questions. Then, before randomization, patients were stratified to 1 of 2 subgroups based on their level of education: ≤12th grade or greater than 12th grade.

For each subgroup, consecutive patients were randomized to the video group (video informed consent) or the verbal group (traditional verbal informed consent). Randomization was performed by the following means: patient data collection packages (containing demographic forms and an outcome questionnaire) were labeled as video or verbal in equal numbers for each subgroup, shuffled face down, and picked from the top of a stack for each patient who was entered into the study.

Patients in the video group viewed "Arthroscopic Knee Surgery: Return to Action,"[9] an educational videotape for patients (with a running time of 12 minutes) prepared by the American Academy of Orthopaedic Surgeons in conjunction with the National Association of Orthopaedic Nurses. Patients in the verbal group received conventional verbal informed consent by an assistant (an Orthopaedic Technologist or Physician Assistant). The surgeon and assistants were unaware of the content of the videotape and were unaware of the content of the questionnaire. The surgeon was aware of the study hypothesis; the assistants were not. However, the assistants were aware that a study was ongoing.

After the (video or verbal) consent, patients in both groups were given unlimited time to ask questions of the assistant. Then, patients were given unlimited time to read and sign a standard surgical consent form.

Finally, patients were given unlimited time to complete a questionnaire that was designed to assess outcome. The questionnaire consisted of 15 multiple-choice questions evaluating comprehension and a single subjective self-assessment of satisfaction with the information provided (question 16; Fig 1).

The questionnaire was developed by 1 of the authors (M.J.R.) who was unaware of the content of either the videotape or the verbal informed consent. The questions were pilot tested on 5 randomly selected individuals to clarify phrasing and ordering of questions. The questionnaire reading level was determined to be at the 8th grade level.

Statistical Methods

Noncontinuous data were compared by χ-squared analyses and continuous data were compared using a 2-sample t test. Statistical power analysis using a 1-sided test for 2 independent variables determined that a sample size of at least 50 patients in each group was required to detect a 10% difference in comprehension with 80% power (1-beta) at an alpha level of 0.05 when the standard deviation in comprehension was ≤20.

RESULTS

There were 152 consecutive patients who met the study inclusion criteria over a 15-month period. Two patients of ≤12th grade education level who were randomized to the verbal group refused to complete the questionnaire. We thus report results on 150 patients.

There were 73 patients randomized to the video group and 77 to the verbal group. The groups were not significantly different with regard to age, gender, race, or education level (Table 1). The video group scored a mean comprehension of 78.5% (standard deviation, 14.8%). The verbal group scored a mean comprehension of 65.4% (standard deviation, 20%). The difference is significant ($P = .00001$) (Fig 2).

In the subgroup with ≤12th grade education level, the video patients scored a mean comprehension of 73.1% (standard deviation, 18.1%). The verbal patients scored a mean comprehension of only 54.1% (standard deviation, 23.1%). The difference is significant ($P = .0011$) (Fig 3A).

In the subgroup with greater than 12th grade education level, the video patients scored a mean comprehension of 81.3% (standard deviation, 10.5%). The verbal patients scored a mean comprehension of 71.1% (standard deviation 14.1%). The difference is significant ($P = .0002$) (Fig 3B).

With regard to patient subjective self-assessment of satisfaction, there was no significant difference between groups (Table 2); 98.6% of the video group and 97.3% of the verbal subgroup rated their satisfaction with the information provided as very good or good.

DISCUSSION

The hypothesis that video informed consent improves knee arthroscopy patient comprehension com-