



ASSESSMENT OF THE FEASIBILITY AND IMPACT OF SHARED DECISION MAKING IN PROSTATE CANCER

EROL ONEL, CRISTINA HAMOND, JOHN H. WASSON, BERT B. BERLIN, MATTHEW G. ELY,
VINCENT P. LAUDONE, ARTHUR E. TARANTINO, AND PETER C. ALBERTSEN

ABSTRACT

Objectives. To assess the feasibility and patient impact of using standardized video presentations concerning alternative treatments for managing localized prostate cancer.

Methods. One hundred eleven men with newly diagnosed localized prostate cancer were shown a video tape concerning the risks and benefits of four treatment options: radical surgery, external beam radiation, hormonal therapy, and watchful waiting. The impact of the -video presentation was assessed using a questionnaire completed by the patient before and after viewing the video and again following a discussion with his treating physician.

Results. Patients demonstrated significant increases in their understanding of treatment options to manage prostate cancer after viewing the video presentation. Treating physicians confirmed the increased sophistication of their patients' knowledge of their disease and the potential outcomes associated with alternative treatments.

Conclusions. Standardized video presentations of treatment alternatives for prostate cancer can be incorporated into busy office practices. Both patients and physicians benefit from the increased level of understanding that allows physician/patient discussions to focus on the critical risk/benefit tradeoffs rather than simply describing treatment alternatives. *UROLOGY* 51 : 63-66, 1998. ©1998, Elsevier Science Inc. All rights reserved.

Patients with newly diagnosed prostate cancer are presented with difficult decisions regarding the management of their disease. When choosing between alternative treatment strategies, patients must balance the morbidity associated with a specific treatment against the potential gain in longevity and deferred morbidity associated with disease progression. These concepts can be difficult to understand and frequently consume large amounts of time in a busy office practice.

The purpose of this study is to explore the feasibility of using standardized video presentations in

a busy office setting to determine whether this type of presentation could increase patients' understanding of their disease process and treatment options. To accomplish this goal, we asked several urologists practicing in the greater Hartford, Connecticut metropolitan area to participate in a pilot study evaluating the utility of standardized video presentations prior to initiating their usual discussion of treatment alternatives for prostate cancer. The impact of this presentation was assessed using a patient questionnaire offered to patients both before and after viewing the video and again following patients' discussions with their treating physicians.

This project was supported by grant No. H508397 from the Agency for Health Care Policy and Research.

From the Division of Urology, Department of Surgery, University of Connecticut Health Center, Farmington, Connecticut; The Prostate Patient Outcome Research Team, Dartmouth Medical School, Hanover, New Hampshire; and Connecticut Urology, Inc., Hartford, Connecticut

Reprint requests: Peter C. Albertsen, M.D., Division of Urology, University of Connecticut Health Center, MC-3955, Farmington, CT 06030-3955

Submitted: May 23, 1997, accepted (with revisions): August 1, 1997

MATERIAL AND METHODS

From October 1994 through December 1995, patients presenting to any of four physician offices with newly diagnosed localized prostate cancer were offered the opportunity to participate in this project. A total of 111 men aged 48 to 83 years elected to view the videotape. Prior to viewing the videotape, patients met with their urologists to discuss their biopsy results and staging information, including their prostate-specific antigen (PSA) values and biopsy Gleason score. Urologists

TABLE 1. Patient characteristics

	Radical Surgery	Radiation Therapy	Hormonal Therapy	Watchful Waiting
Number of patients	32	33	8	22
Mean age (years)	62	68	75	71
Mean Gleason score	6.4	6.2	6.6	5.8
Mean serum PSA (ng/mL)	7.8	8.7	24.1	7.3

presented basic treatment options including radical surgery, radiation therapy, and watchful waiting during a standard 15 to 30-minute office visit. Patients were then offered the option of viewing a 45-minute video presentation that discussed the risks and benefits of prostate cancer interventions, including detailed information concerning potential treatment outcomes associated with radical surgery, external beam radiation, and watchful waiting. Some patients elected to view the video in the office; most chose to view the video at home.

Prior to viewing the videotape, each patient was required to complete a questionnaire regarding their knowledge of prostate cancer and their familiarity with different treatment options. The patients were then shown one of six versions of the video presentation. Each presentation was identical except for variations in the tables of risk factors which were adjusted according to the patient's age and his tumor histology as assessed by the Gleason grading system. The video presentations stratified patients into three risk groups according to Gleason grade (2 to 4, 5 to 7, and 8 to 10) and patient age (55 to 65 and 66 to 75 years). After viewing the presentation, patients were asked to complete a second questionnaire. A follow-up survey was sent to patients participating in the project to assess their final treatment decision and the impact of their discussion with their treating physician.

No formal methods were used to assess patients' knowledge of their disease and treatment options either before or after viewing the presentation. Instead, impressions were gathered from participating physicians concerning follow-up discussions that took place in the office. Physicians commented that the video presentation neither added nor subtracted time from their customary follow-up visit that often lasted 30 to 60 minutes.

RESULTS

Of the 111 men who viewed the videotape, 97 men completed the questionnaire. Follow-up survey information was obtained from 95 of the 97 patients for a response rate of 98%. Fourteen men were excluded because of incomplete medical records or failure to complete the initial survey instrument. Characteristics of the study population are listed in Table 1. The mean age of the study group was 67 years; however, the average age of men undergoing radical prostatectomy and external beam radiation was younger than those choosing hormonal therapy or watchful waiting. Patients selected treatment as follows: 32 radical prostatectomy, 33 external beam radiation therapy, 8 hormonal therapy, and 22 watchful waiting. The average Gleason score for each of the four study groups was comparable; however, the serum PSA levels of the men undergoing hormonal therapy was significantly higher than men in the other three groups.

All men participating in this study had at least a high school education and a significant number had additional years of college or graduate study.

Patient responses to the study questionnaire suggest that the video presentation contributed greatly to their knowledge about prostate cancer (Fig. 1). Upon entering the physicians' offices, 56% of patients felt they had only a fair or poor knowledge of prostate cancer or its treatment options. Thirty-eight percent stated they had a good or very good understanding and 6% had an excellent understanding of their disease. After viewing the video, patients reported a significant increase in their knowledge. Only 6% had a fair or poor understanding of their disease, whereas 80% had a good or very good understanding and 14% stated they had an excellent understanding of their disease and the associated treatment options. Results of the follow-up survey indicated that the discussion with their personal physician further increased their knowledge. The final follow-up survey indicated that fully 40% of patients felt that they had an excellent understanding of prostate cancer and its treatment options, whereas only 6% stated that they had a fair or poor understanding. The remaining 55% of patients stated that they had a good or very good understanding of their disease.

The study cohort was also asked whether they felt they had participated in their treatment decision. Figure 2 presents data for each of the four treatment groups. Results range from a low of 75% to a high of 84% of patients who felt that they participated "a lot" in their treatment decision. The final survey also inquired whether patients were satisfied with their treatment decision (Fig. 2). Overall, 93% of patients were either delighted, pleased, or mostly satisfied with their treatment decision. Patients undergoing orchiectomy were the most satisfied, whereas patients electing surgery reported the lowest satisfaction rate at 84%. Satisfaction with their treatment decision, however, did not necessarily correlate with whether they would choose the same therapy again. Only 71% of patients undergoing hormonal therapy would select this therapy a second time, whereas only 68% of watchful waiting patients would choose therapy again. Among patients undergoing radical prostatectomy, 66% commented that they

Pre-Video Post-Video Post-Physician

FIGURE 1. Patient understanding of their disease process and treatment options (filled bar, poor/fair, shaded bar, good/very good, open bar, excellent).

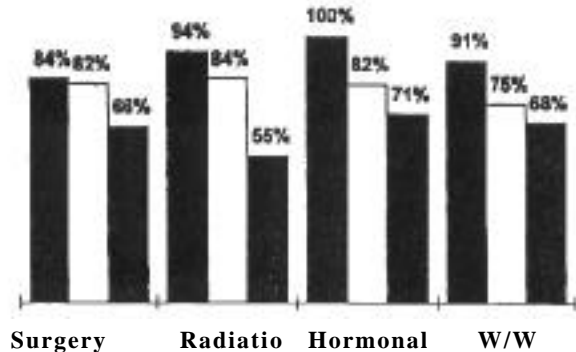


FIGURE 2. Patient responses to survey questions (filled bar, satisfied with choice; open bar, participated a lot, shaded bar, would choose again; W/W = watchful waiting).

would undergo surgery again, whereas 55% of radiation therapy patients would opt for radiation therapy a second time.

COMMENT

Patients with newly diagnosed localized prostate cancer face difficult decisions regarding treatment selection. Frequently, patients make their treatment selection in the absence of knowledge concerning the likelihood of disease progression or the available treatment options. Researchers have recently explored alternative methods of increasing patients' knowledge about prostate cancer so that they can become participants in the decision-making process.

Research concerning patient decision making has an extensive history. In the early 1970s, Wennberg and Gittelsohn¹ noted significant variations in the age- and sex-adjusted rates of surgeries such as tonsillectomy and hysterectomy that did not appear to correlate with medical criteria. Detailed interviews with physicians revealed that physicians

frequently assumed a paternalistic role and made decisions for their patients which they felt were in their patients' best interest. Interviews with patients, however, indicated that patients did not feel they had participated in the decision-making process in any meaningful way. When patients were informed of the multiple risks and benefits of potential treatment options, rates of several surgical procedures gravitated toward a mean value. An unexpected benefit of informed decision making was an increase in patient satisfaction with their choice of therapy. As technology matured, patients were able to use videotapes and interactive computer programs to understand more about their disease and treatment options.

In the early 1980s, researchers began experimenting with this technology in the field of urology². Interactive computer video programs were developed for patients with symptoms of benign prostatic hyperplasia. The video presentation developed for these patients not only provided information about their disease, but also helped them to understand the tradeoff between possible improvement in voiding function and the potential for complications inherent to surgical intervention. Shared decision making has evolved using multiple different formats. Interactive videos and Internet web sites are now available for patients suffering from benign prostatic hyperplasia, breast cancer, uterine cancer, low back pain, mild hypotension and cardiac ischemia. Multiple studies have shown that by combining physician knowledge with patient preferences, patient satisfaction can be improved and physician time can be used more efficiently.³

The current study builds on these findings. We found that patients who were offered an opportunity to view a standardized video presentation concerning prostate cancer therapies demonstrated an increased understanding of their disease and were more fully informed of available treatment options. One potential concern raised by this study is the possibility that bias was introduced in the patient presentations. In order to evaluate this hazard, we hosted an evening screening of the video for area physicians who participated in prostate cancer management. Physicians from multiple specialties, including internal medicine, family practice, medical oncology, radiation therapy, and urology, were invited to view the video presentation. Most physicians initially stated that the video presentation was biased in favor of a competing specialty. Specifically, urologists felt the presentation was biased in favor of radiation therapy, while radiation therapists felt the presentation was biased in favor of surgery. Medical oncologists felt the video was biased in favor of treatments directed at localized disease, whereas internists and family practitioners

felt that the video presentation was biased in favor of aggressive treatment over conservative management. These discussions led to a more sophisticated understanding of the perspectives of different treating physicians and to the conclusion that the video presentation accurately reflected the risks and benefits of alternative treatment options.

Other issues regarding the video presentation concern the potential for increasing patient confusion surrounding treatment for this disease. We did not find this to be true. Of the 97 patients who completed the follow-up survey, only 2 voiced the opinion that they would have preferred their physician to make the treatment selection. All of the remaining patients were enthusiastic about the opportunity to participate actively in the decision process.

Some physicians voiced concern that a video presentation would consume too much valuable office time. Multiple physician interviews at the end of the project, however, suggested that the video presentation neither increased nor decreased the time needed for patient interaction. Rather, the urologists participating in the project felt that patient discussions were conducted on a more sophisticated level compared with patients who had not viewed the video. Patients no longer had to be taught the basic vocabulary of prostate cancer management. Instead, physicians were able to spend time discussing the concerns that were most relevant to their patients.

Finally, some physicians raised concerns that a video presentation is no longer relevant since patients now have multiple sources from which to obtain necessary information. Based on our analysis of the questionnaire data, this does not appear to be the case. A significant number of patients who present to physician offices for treatment discussions lack basic knowledge of their disease and potential treatment options.

The challenge posed by this technology stems from the rapid evolution of competing treatment alternatives. Since the initial development of this video presentation, several new treatment options have emerged as significant choices for patients. Specifically, brachytherapy and cryotherapy were not covered in the initial video presentation. Updating a video to include information concerning

these treatment alternatives is expensive and time consuming, but must occur for the technology to stay relevant.

We have demonstrated the feasibility of using video presentations concerning the treatment alternatives for prostate cancer in busy urologic practices. We found that the use of a prostate cancer video both increases patient knowledge of treatment options and potentially incorporates the patient into the decision-making process. We believe that a standardized video presentation regarding prostate cancer management can result in high patient satisfaction with his prostate cancer therapy and hopefully will result in improved patient outcomes.

CONCLUSIONS

Physicians can incorporate standardized video presentations of treatment alternatives for prostate cancer into busy office practices. Both patients and physicians benefit from the increased level of understanding of prostate cancer and the associated treatment options. Physician/patient discussions are able to focus on critical risk/benefit tradeoffs rather than simply describing treatment alternatives. The video presentations do not necessarily save physician time, but do facilitate discussions on a more sophisticated level. The challenge to the technology is to keep pace with rapidly changing developments in the field of prostate cancer management, including new treatment alternatives and new information concerning treatment efficacy and complications.

ACKNOWLEDGMENT. To the following physicians for allowing us to work with their patients in this project: Dr. Peter J. Bosco, Dr. Brendan G. Fox, Dr. R. James Graydon, Dr. Bernard Kostro, Dr. Steven J. Sbuchman, and Dr. Douglas H. Viets.

REFERENCES

1. Wennberg J, and Gittelsohn A: Variations in medical care among small areas. *Sci Am* 146: 120-134, 1982.
2. Barry MJ, Fowler FJ Jr, Mulley AG Jr, Henderson JV Jr, and Wennberg JE: Patient reactions to a program designed to facilitate patient participation in treatment decisions for benign prostatic hyperplasia. *Med Care* 33: 771-782, 1995.
3. Wagner EH, Barrett P, Barry MJ, Barlow W, and Fowler FJ Jr, The effect of a shared decision making program on rates of surgery for benign prostatic hyperplasia. *Med Care* 33: 765-770, 1995.