Supplementary material

Supplementary Table 1. Specific intervention of two groups.

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| Intervention measures | Control group  (routine care intervention) | Study group  (routine care intervention + extended intervention under the medical community model) |
| Before surgery | Psychological care intervention was given to the patient.  (1) We described the purpose, method, process and possible complications of I125 seed implantation therapy to patients and their families in detail, reduced the fear and anxiety of patients. Besides, we shared successful cases and enhance the confidence of patients.  (2) Then, we assisted patients with bowel preparation. Low-residue diet was given 3 days before surgery and gas-producing food was forbidden 1 day before surgery. Cleaning enema was performed on the evening before surgery and the morning of surgery to reduce gas and feces in the intestine, preventing accidental puncture of the intestine in the surgery and postoperative infection.  (3) Subsequently, we assist patient with skin preparation. Skin preparation was done, mainly including the perineum and pubic symphysis to the subumbilical region. The skin clean was kept clean and scratches were avoided. | Same as control group |
| During surgery | (1) We assisted the patient to take lithotomy position to avoid limb compression. Then we closely observed the vital signs of the patient, paid attention to the patient’s state of consciousness, complexion, *etc.*, and timely reported to the doctor if any abnormality.  (2) We accurately delivered surgical instruments and articles and recorded the number and location of I125 seeds implanted. | Same as control group |
| After surgery | (1) The patient was given continuous ECG monitoring to observe whether the patient had hematuria, hematochezia, dysuria and other symptoms, and timely treatment if there were abnormalities.  (2) Keep the patient’s urinary catheter unobstructed, observe the color, amount and nature of urine, regularly replace the urine bag to prevent infection.  (3) Give the patient pain care, assess the patient’s pain, and take corresponding analgesic measures.  (4) Perform radiation protection, inform the patient and his family that I125 seeds have radioactivity and should avoid long-term close contact with others. The patients should live in a ward alone. We set warning signs at the door of the ward, and the medical staff should wear protective equipment when performing care operations.  (5) Give the patient diet care, and they can eat liquid diet 6 hours after surgery. It gradually transitioned to semi-liquid diet and common diet. Encourage the patient to drink more water, to increase urine volume and promote particle excretion.  (6) Give the patient activity guidance. They need absolute bed rest within 24 hours after surgery and avoid strenuous activity. Gradually, patients can increase the amount of activity, but avoid prolonged standing, walking and bending down.  (7) We pay attention to the complications such as urinary incontinence, rectal injury, sexual dysfunction and give corresponding measures. | (1) Establishment of the medical community. Establish an organizational structure, jointly establish a medical community by the leading hospital and grassroots medical institutions and clarify the responsibilities and division of labor of each member unit; establish a medical community management committee to be responsible for coordinating the allocation of medical resources, business management and quality control under the medical community in an overall manner [12]. Formulate cooperation agreement, sign cooperation agreement for medical community, clarify the rights and obligations of all parties, including medical service provision, personnel training, technical support, two-way referral and other aspects; determine the operating mechanism and management mode of medical community, and ensure the smooth operation of medical community [13].  (2) Advancing the tiered diagnosis and treatment model. Patients were evaluated and graded. Prostate cancer patients treated with I125 seed implantation were comprehensively evaluated and divided into different grades according to the evaluation results [14]. Two-way referral was performed. We established a smooth two-way referral channel to ensure that patients can be smoothly referred between different levels of medical institutions; critically ill patients are transferred from grassroots medical institutions to the leading hospital for treatment. Stable and rehabilitation patients are transferred back to grassroots medical institutions for subsequent rehabilitation and care [15]. Resource sharing realizes the sharing of medical resources in the medical community. Patients can enjoy the same quality of medical services as the leading hospital in grassroots medical institutions, which improves the utilization efficiency of medical resources.  (3) Homogenization training. A training program was formulated. According to the actual needs of prostate cancer patients treated with I125 seed implantation, a detailed training plan was developed, including disease knowledge, treatment methods, care skills, radiation protection and psychological support. The training uses centralized training, on-site guidance, distance teaching and other means. The leading hospital selects experienced medical staff to go to grassroots medical institutions for on-site guidance and training to improve the professional level of grassroots medical staff. Assessment and evaluation: Assess and evaluate the medical staff participating in the training to ensure the training effect. The evaluation content contains theoretical knowledge, operating skills, clinical practice and other aspects. Those who pass the assessment issue the training certificate.  (4) Homogenized home care intervention. We established a home care intervention team. Team members entailed doctors, nurses, rehabilitators, dietitians, *etc*. According to the needs of patients, we provided personalized care intervention services, mainly including disease observation, care guidance, psychological support, radiation protection and so on [16]. Besides, we established the quality control system of home care intervention, supervised and managed the whole process of home care services, and regularly evaluated the quality of home care services [17]. Additionally, we collected the opinions and suggestions of patients and their families and continuously improve the quality of care services.  (5) Follow-up. According to the patient’s condition and treatment, a personalized follow-up plan was made. The patients were regularly reexamined and evaluated by telephone follow-up, door-to-door follow-up, outpatient follow-up and other means. The treatment plan and care measures were adjusted in a timely manner. Establish a follow-up information management system for patients to realize the information sharing between member units in the medical community, which facilitates medical staff to timely understand the situation of patients and provide better medical services. |

ECG: Electrocardiogram.