

# 学 位 論 文 の 要 旨

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学 位 論 文 名 HEALTH RELATED QUALITY OF LIFE AFTER  
ORTHOTOPIC NEOBLADDER CONSTRUCTION AND ITS  
COMPARISON WITH NORMATIVE VALUES IN THE  
JAPANESE POPULATION  
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## 論 文 内 容 の 要 旨

### INTRODUCTION

Orthotopic neobladder construction has enabled patients to maintain voluntary voiding after cystectomy through the urethra without any urinary stoma requiring a specific appliance. However, in addition to problems related to micturition and urinary continence, health related quality of life (QOL) after surgery appears to be another important issue in the decision making process of urinary diversion following cystectomy. Potential changes in health related QOL after cystectomy with urinary diversion could affect the decision making process in terms of which would be suitable and/or desirable in individuals. Recently several groups analyzed QOL in patients with total cystectomy and subsequent orthotopic neobladder construction using certain questionnaires, in which orthotopic neobladder QOL was compared to that of different types of urinary diversion. Using a sickness impact profile we noted that surgical impact on QOL in patients with a neobladder appeared to be less significant than what we had expected, ie mental, physical and social functioning related QOL was better in those with a neobladder than in those with an ileal conduit. Based on this result the assessment of health related QOL appears to be essential and realistic compared with that in the age matched healthy population.

### MATERIALS AND METHODS

Between November 1996 and June 2003, 75 patients underwent orthotopic neobladder construction at our institution, of whom 47 males and 9 females were selected for study. The remaining 19 patient, who were dead or followed less than 6 months after surgery, were excluded. Two types of questionnaire, namely the RAND 36-Item Health Survey (SF-36), version 2 and the Functional Assessment of Cancer

Therapy-Bladder Cancer, were mailed to all 56 patients as a self-reporting survey and 48 (86%) who returned the completed forms were included in this analysis. The preoperative diagnosis was bladder cancer in 46 cases, and bladder sarcoma and urachal cancer in 1 each. No patients experienced any form of recurrence in this study. The modified Studer technique was used in all except 1 patient, in whom the Hautmann technique was used. Mean patient age at surgery and QOL assessment was 65.6 (range 29 to 76) and 69.3 years (range 35 to 80), respectively. Mean followup was 51.6 months (range 7 to 86). Patients were divided into subgroups according to age and sex, and postoperative QOL was compared with Japanese population normative values.

### **RESULTS AND DISCUSSION**

Overall there was no significant difference in any SF-36 scales between patients with an orthotopic neobladder and the age matched Japanese population. Likewise 50 to 59-year-old patients showed no significant difference in any SF-36 scale vs the age matched Japanese population. In 60 to 69-year-old patients the mean bodily pain value was significantly higher than in the age matched Japanese population ( $p < 0.01$ ). On the other hand, patients older than 70 years were more likely to have a lower role-physical score than the age matched Japanese population ( $p < 0.05$ ).

QOL analysis in 50 to 59-year-old male patients revealed no significant difference in SF-36 QOL items between the neobladder and control Japanese population. On the contrary, 60 to 69-year-old male patients with a neobladder were more likely to have better QOL in physical functioning, role-physical and role-emotional besides bodily pain than the age matched control ( $p < 0.05$ ,  $< 0.05$ ,  $< 0.001$  and  $p < 0.001$ , respectively). In male patients older than 70 years role-physical related QOL remained better than in the age matched Japanese population ( $p < 0.01$ ).

Patients with a neobladder who were followed more than 24 months were more likely to have a lower FACT-B1 incontinence score than those followed less than 24 months ( $p < 0.05$ ). On the other hand, the continence related QOL alteration alone did not appear to affect health related QOL, as analyzed by SF-36.

Previously groups have discussed the issue of health related QOL in patients with an orthotopic neobladder and other types of urinary diversion, that is an ileal conduit or continent urinary reservoir. Previously we have analyzed the effects of an orthotopic neobladder and ileal conduit on health related QOL using the sickness impact profile and found that mental, physical and social functioning QOL was better for the neobladder than for the ileal conduit. These outcomes suggest that the orthotopic neobladder contributes to better health related QOL compared to other types of urinary diversion. As a next step to achieve more essential insight into changes in QOL after

neobladder construction, we compared health related QOL in patients with a neobladder to that in the age matched control population and postulated that health related QOL after neobladder construction might not essentially differ from age matched normative values in the control Japanese population. In this study no significant difference in SF-36 QOL scales was observed between neobladder group values and the normative Japanese population value.

It might be plausible that the changes in QOL after cystectomy might be associated with postoperative continence status. To evaluate whether continence status after cystectomy affects QOL in patients with a neobladder QOL analysis was performed focusing on items related to continence status on the bladder cancer subscales of FACT-B1. This observation might indicate that incontinence alone does not affect health related QOL in patients with a neobladder. In turn, this suggests that the majority of patients with a neobladder probably have no experience with urinary incontinence during the day. Even if they are troubled with nighttime incontinence at the early phase after surgery, they can manage and overcome it later by timed voiding during the night.

### **CONCLUSIONS**

Our study shows that there is no essential difference in health related QOL between patients with a neobladder and the age matched Japanese control population. The current results provide some primary evidence to help in decision making and eliminate potential anxiety about worse QOL after cystectomy.