

# Long term effects on Quality of Life after Transurethral Resection of the Prostate in Hong Kong

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**Abstract** Observation of day to day practice has indicated that some patients after transurethral resection of the prostate continue to have long term problems. There is very little known about the long term quality of life issues in Hong Kong males after this procedure. This study aimed to inform processes of discharge planning and follow up by nurses, the family and other health care professionals and to understand the extent and effect of this operation on the quality of life of the client group. The study adopted a Delphi technique utilizing three rounds of data collection. An expert panel of 113 became 'best informants' and were defined as those who were familiar with the situation and willing and able to communicate their ideas. Seventeen items were identified that represented issues translated from the informants own words. Four groups of items were identified; (A) items that had a large effect on the lives of the largest portion of informants; (B) items that had a large effect on the lives of the least proportion of informants; (C) items that had a small effect on the largest proportion of informants; (D) The items that had no effect on the lives of the largest proportion of informants. The 17 items provide an outline of the extent and effect of TURP on the quality of life of Hong Kong men 1-2 years after TURP. This can be used to inform follow up procedures which are best introduced 12 months after the date of operation.

## BACKGROUND

One of the authors noticed in clinical practice that a number of patients seemed to suffer long term problems after transurethral resection of the prostate (TURP). The extent of these problems and significant patterns were unknown and it was difficult to consider both the nature and content of long term interventions. TURP has been the gold standard for surgical treatment of benign prostatic hyperplasia (BPH) for more than 50 years. Transurethral resection of the prostate is a standard procedure conducted under spinal anesthesia using a 24Fr Storz electroscope (Yoichi *et al.*, 2000). After the surgery it has been said that there can be a significant improvement in the quality of life of BPH patients particularly those related to troublesome urinary symptoms

(Venrooij *et al.*, 1995). The variable nature of this improvement is not clearly described in the literature and is certainly not reported in a Chinese population. A primary purpose of this study was to identify evidence that could inform better practice for the long term after care of this client group in Hong Kong. These results could possibly be transferable to other Chinese client groups.

## LITERATURE REVIEW

The purposes of the literature review were to identify the current state of understanding about the quality of life after TURP and to identify ways in which the quality of life was assessed in other relevant health care research.

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## Measuring the quality of life after transurethral resection of the prostate.

Quality of life as been defined as an individual's perception of their position in life. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment (WHO, 2004).

Measurements of quality of life in genito-urinary surgery have been based on assessments of the general well-being of men, their perception of urinary difficulties, and the impact of urinary dysfunction on living activities and social life (Garraway & Kirby, 1994). Furthermore, these quality of life measures have included items on sexual functioning, general health, worry, limitations in daily activities, speed of recovery, satisfaction with results of the procedure and global improvement (Lamping *et al.*, 1998).

It has been shown that there are statistically significant gains in all three measures of quality of life – the general health, mental health and activities indices after TURP (Yoichi *et al.*, 2000, Wasson *et al.*, 1993, Doll *et al.*, 1992). Results have shown that subjects with severe symptoms before TURP surgery benefited most and those with less 'bothersome' symptoms demonstrated less improvement in their quality of life (Fowler *et al.*, 1988). Research findings have shown that the more severe the preoperative symptoms, the greater the improvement the patients were likely to report following TURP (Doll *et al.*, 1992). There is evidence that patients show a greater improvement in obstructive symptoms (hesitancy, poor stream, dribbling and fullness) and life-style than in the irritative symptoms (dysuria, frequency and nocturia). This has been supported by findings that show that the greater the pre-operative symptoms, the greater the likely improvement 3 months after surgery (Emberton *et al.*, 1996). It has been found that irritative symptoms caused more impairment than the obstructive symptoms and that after TURP there is improvement in the disease-specific quality of life but not with generic quality of life (Quek *et al.*, 2001). It has also been demonstrated that at 12 months after TURP there are significant improvements in the quality of life domains of social interaction, energy, pain, emotional reactions and sleep (Macdonagh *et al.*, 1997).

Following the selective literature review that is outlined above, it was still felt necessary to discover the long term impact on the quality of life of patients' after TURP in a Chinese population. Previous studies had almost exclusively used self-administered questionnaire, health status or symptoms scales to describe or measure the phenomenon. They all used pre-determined questions to guide the patients' response. This means that the data were largely determined by the precedents and priorities perceived by health care professionals and not the patients. This study takes the position that the patient's experience is the best determinant of the issues that have most impact and priority in their lives. It is believed that more informative data can be generated from the patients' personal experiential framework in order to discover what they really need help with in the long term. This required that the researchers identify a data collection process that enabled patients to determine a frame of reference that was most fitted to their actual needs rather than by frames of reference set by health care researchers. The literature review confirmed that the following research question was feasible and relevant to better nursing practice: What is the impact of Transurethral Resection of Prostate on the long term quality of life of Hong Kong Chinese patients?

## METHODOLOGY

The research design required that data be grounded in the experiences, perspectives and conceptual frameworks of the patients. In order to achieve this the Delphi technique was adopted. The Delphi technique is a research tool developed in the 1950s (Delbecq *et al.*, 1975). It has been used frequently in nursing research and its form and history should be familiar to most experienced researchers. Full and sometimes repetitive accounts may easily be found in the literature (Bond & Bond, 1982; Hitch & Murgatroyd, 1983; McKenna 1994, French *et al.* 2002; Crisp *et al.*, 1997; Bowles, 1999; Bonner & Stewart, 2001; Powell, 2003). In brief there are six events involved in a conventional Delphi Study: 1) selecting the expert panel; 2) formulating the question(s); 3) statement generation; 4) reduction and categorization. 5); rating; 6) analysis and iteration. These stages are usually achieved in 3-4 rounds and in between each of these rounds there takes place a process of analysis of the received data, and it



preparation for the next round (Mead, 2001).

In the current study the expert panel was defined as key informants and as such they should: have every day experience and know something about the subject of inquiry; are willing to express opinions about the subject of the inquiry; and are able to express opinions about the subject of the inquiry (French, 2002). The expert panel were identified from the hospital computer record system and were patients that had been diagnosed with benign prostate hyperplasia and had undergone TURP between 12 months to 24 months prior to data collection. A total of 113 key informants were identified for this study.

Because the Delphi survey uses a different data collection question and analysis process at each stage it is believed that it is less confusing if each stage is reported sequentially here. Full details of this process can be found in the original report (Yau, 2004).

## DATA COLLECTION

As with any survey method a major characteristic of a Delphi study is the asking of questions. Question formulation is limited to often only one key question being iterative and intended to achieve group consensus. In round 1, the statement-generating question, involves asking the major stimulus question. The formulation of this is the key to the direction of informants' response (French *et al.*, 2002). In round 2, iteration or repetition processes the responses, and removes duplicated items on which there is consensus. The intention of this iteration is to try to consolidate consensus on the relevant issues. In round 3, statements that had been found to reach consensus were prioritized (Mead & Moseley, 2001).

### First Round Data Collection

The expert panel, were informed of the purpose of the study in a covering letter (information sheet). Also enclosed were a response sheet (questionnaire) and a stamped addressed envelope. Explanations of the level of anonymity and confidentiality were given.

The round one questionnaire comprised of 3 major parts. Part A was the major brainstorming question. This was in the form of an instruction as well as a question. It was in Chinese and the cross translated English version reads as: Please make a list as long as possible of things that you can remember on any particular changes in your life since the Transurethral Resection of the Prostate operation? Make a list below with 3 to 4 words to express your meaning. Part B asked for demographic data and part C comprised the informant's medical history to understand unexpected differences that may occur in the client group.

A pilot study was conducted to assess the feasibility of the data collection process, the effect of the opening question, the communicability of the round one questionnaire and the covering letter and to estimate the ease of return and the consequent response rate from the target group (French *et al.*, 2002). A total of 10 subjects were recruited to the pilot study, who met the criteria for the expert panel.

The information sheet used pre-determined University standardized ethical guidelines and communication pro-formers. The return of the questionnaire was assumed to represent consent for participation. Ethical approval was granted by a University Ethics Committee and a Hospital Ethics Committee

### First round data analysis

About a third (36.2%) of those approached (n=113) responded to the first round of survey by returning a properly completed questionnaire. This was an acceptable response rate for a Delphi survey given based on the selection criteria, the informants' reply marked their 'willingness' to participate. A total of 95 items were received from 41 respondents. The 95 items were translated into English and then back translation by two senior clinical practitioner colleagues. Afterwards two researchers independently read through the items.

### Informant characteristics

All 113 of the expert panel were approached in round 1. The overall age range was from 61- 82 years old with the mean age 72, 76% were married, 46.3% of informants were officially retired and 41.5% were unemployed. The past medical history profile revealed

that 27% had been diagnosed with hypertension, 12% had been diagnosed with diabetes mellitus and 24% had a miscellany of medical problems including heart disease, gout, asthma, osteoporosis, renal failure, bone pain, cataract and hernia. Repeat TURP was reported by 20% and 7.3% had had bladder stone operation.

### First round results

It was agreed that there were 22 duplicated items leaving 73 final items. These 73 items delivered 18 categories after latent content analysis (table 1).

**Table 1 First and second round category**

First round categories	Second round categories
1) urination is good	1) good urination
2) urination is a problem	2) poor urination
3) daily life	3) daily living activities
4) body condition	4) body condition
5) going to toilet	5) going to toilet
6) soiling clothes	6) soiling clothes
7) feeling good	7) feeling good
8) leakage of urine	8) leakage of urine
9) use of napkin	9) use of napkin
10) pain	10) pain
11) urge to pass urine	11) urge to pass urine
12) bowel activity	12) bowel activity
13) sex life	13) sex life
14) same as before	14) eating and drinking
15) foods and drinks	15) worrying
16) worries	16) doing exercise
17) exercise	17) finding blood in urine.
18) blood in urine.	

### Second round data collection

The categories were utilized as the basis for the second round data collection. A structured postal questionnaire along with a reminder letter was developed for round 2. Each of the categories included 3 examples of actual quotations (items) from round 1 (as stated by respondents). Each respondent was asked

to say whether they agreed with the category titles, if not to suggest a better title for the categories and write the title in the change column. Also the respondent was asked to add some more examples to each category if they thought the examples given were not the best example. The format used for each category is given in Figure 1. The compiled second round questionnaire was sent to the 41 respondents from the first round.

### Second round data analysis

The second round data analysis was conducted in the same way as the first round. Two researchers independently analyzed the combined 160 items accumulated from round 1 and 2. In addition analysts were asked to consider the comments on category change when formulating final list. A meeting between the two analysts considered points of agreement and disagreement, where disagreement occurred, the opinion of informants was deferred to where it existed. Given that the process of analysis had already occurred after round 1, the round 2 category list very similar and consisted of relatively minor alterations. These differences can be examined in table 2.

### Second round results

There were 27 respondents to the second round of the survey and this represented a 65.8% return rate. A total of 87 new responses were received. These items were again reduced by deleting duplications. A total of 160 items were received and independent re-analysis for categories produced a list of 17 final categories (table 1).

### Third round data collection

The second round category list was utilized as the basis for the third round data collection. Each of the

Categories:	Examples:
Urination is good	- pass urine back to normal after the operation
Change: _____	- free flow of urine after the operation
_____	- an improvement in pass of urine after the operation, psychologically feel good
_____	_____
	_____

**Figure 1 Sample item from second round survey**





1. poor urination
  2. soiling clothes
  3. urge to pass urine
  4. going to toilet
  5. bowel activity
  6. doing exercise
  7. worrying
- B. The items that had a large effect on the lives of the least proportion of informants (ie.1:5) were:
1. feeling good
  2. finding blood in urine
  3. eating and drinking
  4. pain
  5. sex life
- C. The items that had a small effect on the largest proportion (ie.2:5) of informants were:
1. going to toilet
  2. good urination
  3. daily living activities
- D. The items that had no effect on the lives of the largest proportion of informants (ie.1:2 or more) were:
1. use of napkin
  2. Pain
  3. Sex life

## DISCUSSION

The 17 identified categories give some indication of the impact that various issues have on the lives of the post TURP patients. An examination of the number of informants reporting problems and the size of the effect allowed a qualitative analysis that gave 4 sub groups of client problems. Group A represents a set of seven problems that have a big impact on around one third of informants. This is considered to be a large enough number of people for these items to be discussed with TURP patients before their discharge. Similarly group B gives five issues that had a large impact on a smaller proportion of informants. One of these 'feeling good' is a positive effect and therefore cannot be considered an interventional issue. The remaining four items affect about 20% of people and because they have a large effect on them these items can also be considered worthy of exposure to the patient before discharge. Group C represents three items that had a small effect on the largest number of people (2:5 ie 40%) One of these 'good urination' is a positive effect and is not an issue for intervention. This leaves two issues that need to be addressed at the level of follow up and reassurance. Finally Group D represents a set of issues that had no effect on over half of the respondents and they are considered low in priority. They are use of napkin (incontinence pad), finding blood in urine, eating and drinking. Use of napkin relates to the complication of urinary incontinence after TURP (Wilson, 1997). Given that this study examined experiences after 12 months it

**Table 2: Rank order of group mean scores and the total percentages of score (0-10) and conclusion for categories in round 3**

Item (Rank order)	Category	Group Mean	Total % of not at all (Score 0)	Total % of a small affect (Score 1-4)	Total % of large to big affect (Score 5-10)	Conclusions		
						No Affect	small affect	large affect
1. (1)	Poor urination	3.88	30.6	34.7	34.5	1/3	1/3	1/3
2. (2)	Soiling clothes	3.79	28.8	38.5	32.7	1/3	1/3	1/3
3. (3)	Urge to pass urine	3.58	36	32	32	1/3	1/3	1/3
4. (4)	Going to toilet	3.49	25.5	41.2	33.3	1/4	2/5	1/3
5. (5)	Bowel activity	3.45	45.1	23.5	31.4	2/5	1/4	1/3
6. (6)	Doing exercise	3.44	34	36	30	1/3	1/3	1/3
7. (7)	Use of napkin	3.35	57	16.3	26.5	2/3	1/6	1/4
8. (8)	Worrying	3.29	34.6	36.5	28.8	1/3	1/3	1/3
9. (9)	Good urination	3.18	33.3	41.2	25.5	1/3	2/5	1/4
10. (10)	Daily living activities	3.02	29.4	49	21.6	1/4	1/2	1/4
11. (10)	Body condition	3.02	40.4	30.8	28.8	2/5	1/3	1/4
12. (12)	Use of napkin	2.94	49	30.6	20.4	1/2	1/3	1/5
13. (13)	Feeling good	2.83	38.5	42.3	19.2	2/5	2/5	1/5
14. (14)	Finding blood in urine	2.78	43.1	39.2	17.6	2/5	2/5	1/5
15. (15)	Eating and drinking	2.76	34	42	24	1/3	2/5	1/4
16. (15)	Pain	2.76	51	28.6	20.4	1/2	1/3	1/5
17. (17)	Sex life	2.45	49	35.3	15.7	1/2	1/3	1/6



may be that the effect of this are less important in the long term. It is surprising that these three issues had no impact on over half of respondents yet they did have a large effect on 17-20% of informants.

If we take group D findings into consideration, then examine the ratios for large effect in informants on table 2 (remembering that the informants were asked to report things that had the greatest impact on their lives) it can be concluded that the whole list of 17 items represents a list of issues that need to be covered in information giving and pre-discharge interviews specific to this client group. This research gives examples of patients descriptions in their own words and these can be used to formulate a question and answer format for an information leaflet that can be given on discharge. Similarly a pre-discharge interview can use these items as a check list so that patients can be prepared for some of the possible problems they may experience along with advice on what can be done. A helpline would be useful for the simple reason that these findings indicate that only some of the 17 issues affect some of the subjects to a large extent and in any combination. Therefore a process that encourages specificity (help as problems arise) would be most useful. It is also worthy of note that informants report these problems after 12 months, a long time after discharge, and they may remember very little from a pre-discharge interview and information leaflet. It is usual for patients to attend out-patient clinics for immediate post-operative complications, but it is the long term 'nagging' problems that are the concern for this research. With this in mind it can be suggested that follow-up should be initiated at 12 months after the operation. This may take the form of telephone or postal information. The 17 items can be used as a quality of life audit specific to this client group. Ideally it seems that a routine telephone follow up asking 17 questions may be of benefit to patients and may prove to be cost effective in preventing needless out patient appointments (or visits to general practitioner) whilst also giving the opportunity for the nursing team to alleviate any long term problems with quality of life.

## CONCLUSION

The Delphi technique helped to look into the lived experience of a group of post TURP patients in the long term. Because four groups of issues have been

identified it is obvious that not all problems affect all patients and if and when they do exist they have a different level of affect. Because of this a checklist has been produced that can be used to structure information giving procedures that should be applied 12-24 months after surgery with the intent of improving the quality of patients health and lives after TURP.

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### 香港患者接受经尿道前列腺切除术后对生活质量的长期影响

背景：就日常观察，有一些患者在接受经尿道前列腺切除术后，继续出现长期问题。就香港男性接受手术后的长远生活质量问题，已知资料并不太多。本研究旨在指引护士、家人及其他医务人员的出院计划过程及跟进。目的：了解这项手术对这群当事人的生活质量的长期影响及程度。设计：利用德尔菲技巧作三回合资料收集。受访问者：专家小组的定义为最佳受访者，被视为最熟悉情况、记最愿意及最能将他们够的意见表达出来。第一一三组被认定为专家小组。结果：从受访者口中共得出十七类代表事项，并续归类为四组：(甲) 对大部份受访者的生活有较大影响者；(乙) 只对小部份受访者的生活有较大影响者；(丙) 对大部份受访者的生活有较小影响者；(丁) 对大部份受访者的生活没有影响者。结论：这十七类代表事项勾勒出香港男性在接受经尿道前列腺切除术后一至两年后的生活质量所受影响及程度。这可用作跟进程序并以术后十二个月为最佳切入点。

摘要