

FACTORS AFFECTING THE RESPONSE RATE OF FREQUENCY VOLUME CHART

Hypothesis / aims of study

Frequency volume chart (FVC) is an important tool which can confirm bladder capacity, nocturnal polyuria and daytime voiding habit. However, many clinicians have been reluctant to use the FVC because of low response rate. The current study investigated factors affecting and measures improving the response rate of the FVC.

Study design, materials and methods

Between July 2013 and February 2014, we evaluated prospectively 129 patients (male:female=110:19), aged 20 years or older, who visited to our hospital with complaints of voiding problem. Patients were divided into two groups: group A with whom a doctor personally explained the necessity and the completion method of a FVC followed by the nurse's explanation; group B with whom a nurse explained the completion method of a FVC without the doctor's explanation. The response rate of the FVC was grouped into the following 3 grades; completed the FVC for 48 hours or more as "complete response", failed to record for >48 hours or everything as "incomplete response", did not record or submit as "non-response". The complete and incomplete response were regarded as "response". The patient's factors included private insurance, income, education, past medical history, urologic treatment history and international prostate symptom score (IPSS) were evaluated.

Results

The mean age was 61.6 ± 12.0 years (22-85) and there is no significant difference between two groups. The response rate (RR) ($p=0.038$) and complete response rate (CRR) ($p=0.130$) were 94.3%, 86.4% in group A and 82.9%, 75.6% in group B, respectively. Table 1 shows the RR and the CRR according to factors.

Interpretation of results

The RR according to age was showed no significant difference between two groups, and the CRR was lower in patients aged <50 years or ≥ 70 years. The CRR was increased by doctor's explanation in patients aged <50 years, but it was not in patients aged ≥ 70 years. The RR was decreased in patients without the private insurance and with the elementary or university graduate. The RR was increased with doctor's explanation in patients with high school graduate or higher. There was no difference of the RR according to past medical history, but the RR was increased by doctor's explanation in patients without past medical history. Without doctor's explanation the CRR was decreased in patients with urologic medical history.

Concluding message

The RR of FVC was increased by doctor's explanation in patients aged <50 years, without private insurance, with high school graduate or higher and without past medical history. To explain personally the necessity and the completion method of a FVC by doctor was a help to record accurately the FVC in patients aged <50 years and with urologic medical history.

Table 1. Response rate (RR) and complete response rate (CRR) of frequency volume chart

Response rate (%) /Complete response rate (%)	Total (n=129) RR		Group A (n=88) RR		Group B (n=41) RR	
		CRR		CRR		CRR
Age	0.975	0.170	0.400	0.499	0.603	0.204
<59 year	90.0	78.0	94.1	85.3	81.3	62.5
60-69 year	91.3	91.3	91.2	91.2	91.7	91.7
≥70 year	90.9	78.8	100	80.0	76.9	76.9
Sex	0.512	0.606	0.929	0.287	-	-
Male	90.0	83.6	94.2	88.4	82.9	75.6
Female	94.7	78.9	94.7	78.9	-	-
Insurance	0.078	0.106	0.714	0.951	0.071	0.031
Have	93.8	86.4	94.8	86.2	91.3	87.0
Don't have	84.1	75.0	92.9	85.7	68.8	56.3
Income	0.708	0.758	0.045	0.338	0.680	0.569
<2million won/month	89.1	79.7	92.9	83.3	81.8	72.7
2-5million won/month	92.7	85.4	100	92.6	78.6	71.4
>5million won/month	83.3	83.3	66.7	66.7	100	100
Education	0.435	0.258	0.364	0.460	0.507	0.298
Elementary	86.4	77.3	88.9	77.8	75.0	75.0
Middle	94.4	94.4	90.0	90.0	100	100
High	95.2	88.1	100	93.3	83.3	75.0
University	86.4	77.3	92.6	85.2	76.5	64.7
Past medical Hx.	0.943	0.443	0.352	0.885	0.627	0.414
Have	90.9	85.1	92.5	86.8	85.7	81.0
Don't have	90.5	80.0	97.1	85.7	80.0	70.0
Urologic treatment Hx.	0.427	0.734	0.304	0.548	0.731	0.172
Have	93.0	81.9	92.2	88.2	81.0	66.7
Don't have	88.9	84.2	97.3	83.8	85.0	85.0

Disclosures

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