Estimating The Annual Cost of Overactive Bladder in Indonesia

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ABSTRACT

Aim: to estimate the annual economic cost and quality of life related to OAB in Indonesia population by taking into account the direct cost, value of lost productivity and cost consequences associated with OAB.

Methods: cross sectional study was done in Geriatric Clinic and Urogynaecology Clinic in Dr. Cipto Mangunkusumo Hospital Jakarta from July 2005 to March 2006. Primary outcome of this study was annual cost of OAB, symptom and quality of life of OAB patients. Cost data related to personal routine care of OAB and transportation expenditures were obtained by using questionnaires modified from Dowell Bryant incontinence cost index validated questioner. Data related to quality of life were obtained by OAB-q questioner. Subjects included 30 male and female OAB patients aged 18-100 years.

Results: most of patients were female (96.7%). Median of age was 62.5 (30-93) years old, 56.7% patients were elderly (age more than 60 years). Median of total annual cost of OAB was Rp. 2,850,000,-. Median of total personal cost which consist of routine personal care costs and treatment costs were Rp. 2,850,000. Median of total cost which is expended by government for routine personal and treatment of OAB was Rp. 2,500,000,-. Median score of symptom severity was 62.5. Quality of life score was divided into coping, concern, sleep, and social item. Median of coping score was 50.0, concern score was 43.1, sleep score was 50.8, and social score was 38.8. Median of total quality of life score was 44.7. Maximum score of symptom severity and quality of life should be 98.8. The higher the score, the more severe the symptom, but the better is the quality of life.

Conclusion: total annual cost of OAB was Rp. 2,850,000, Quality of life of OAB patient was somewhat poor.

Key words: annual economic cost, overactive bladder.

INTRODUCTION

Overactive bladder (OAB) is estimated to affect 16%-53% of the population, making it one of the most prevalent chronic diseases. However, only 21-27% of patients have received a proper treatment. The majority of Indonesian physicians consider OAB a non serious problem. Most of the time when patients come in with OAB problems, physicians give them only advice or behavioral therapy. They do not share the view that this devastating condition may incur substantial costs for individuals, the healthcare system and society. Cost analyses of OAB are not available in Indonesia as well as in the other developing countries. It is certain that the clinical impact of this disorder will be tremendous as the world’s population ages. In Indonesia it is expected that the proportion of the old-age group (more than 60 years old) will be more than 10.2% by the year 2020. As a consequence, the considerable financial burden of OAB on the national socioeconomic impact will also increase.

This study is expected to provide evidence to convince health care providers, health authorities, and funding agencies that the problem of this disorder is real and will become increasingly critical in the future. The consequences of not adequately treating the disease would become a major economic, humanistic/social burden. The aim of this study was to estimate the annual economic cost of OAB in Indonesia population by taking into account the direct cost, value of lost productivity and cost consequences associated with OAB.

METHODS

A cross sectional study was done in the Geriatric and Urogynaecology Clinics in Dr. Cipto Mangunkusumo Hospital Jakarta from July 2005 to March 2006. Primary outcome of this study was annual cost and quality of life of OAB patients. Males or females aged 19-100 years who had urgency with or without urge incontinence were recruited in this study. Exclusion criteria for this study were proven infection, obvious pathology (e.g. pelvic...
prolapse, enlarged prostate, neurological deficit), and stress or mixed incontinence.

Overactive bladder was defined by the presence of frequency, urgency and urge incontinence, either singly or in combination. Frequency was defined as voiding at least 8 times in 24 hours. Urgency was defined as the complaint of a sudden compelling desire to pass urine, which is difficult to defer. Urge incontinence was the complaint of involuntary leakage accompanied by or immediately preceded by urgency. Stress incontinence was defined by the complaint of involuntary leakage on effort or exertion or on sneezing or coughing. Mixed incontinence was the complaint of involuntary leakage associated with urgency and also exertion, effort, sneezing or coughing.

To determine the economic cost of OAB in this study, direct costs associated with overactive bladder were considered. Direct costs associated with OAB consisted of diagnostic costs (laboratory tests, physician consultations, and urodynamic evaluation), treatment costs (medication, behavioral therapy, devices), routine personal care costs (incontinence day pads, disposable bed pads, hygiene products, and laundry), and other costs (transportation). Cost data were obtained by using cost questionnaires which were modified from a validated cost questionnaires, the Dowell Bryant Incontinence Cost Index (DBICI), developed by C J Dowell et al. in 1999, and translated into ‘Bahasa’ Indonesia. Costs were divided into personal costs and government cost. Government costs is cost paid by the third party and managed by government. Data related to quality of life was obtained by OAB-q questionnaires developed by Pfizer.

Descriptive statistical analyses were used in this study. For categorizable variables, the data will be counted for the absolute and percentage frequencies. For continuous variables, the mean, median, and standard deviations will be given.

RESULTS

A total of 30 subjects (96.7% female and 3.3% male) were included in the study. Characteristics of subjects were shown in Table 1. Most of subjects were female and elderly (median age was 62.5 years). Fifty-six subjects were housewives.

There were 13.3% of subjects who had overactive bladder with urgency, and only 3.3% of subjects who had overactive bladder with mixed urinary incontinence and stress urinary incontinence. Quality of life score was divided into coping, concern, sleep, and social item. Median of coping score was 50.0, concern score was 43.1, sleep score was 50.8, and social score was 38.8. Median of total quality of life score was 44.7. Symptom severity data were also obtained in this study. Median score of symptom severity in this study was 62.5. Maximum score of symptom severity and quality of life should be 98.8. The higher the score, the more severe the symptom, but the better is the quality of life.

Direct cost obtained in this study was classified into personal cost and government cost. Routine personal cost consisted of cost for incontinence day pads, disposable bed pads, hygiene products, and laundry. Treatment costs consisted of medication, behavioral therapy, and device costs, and also cost for transportation. Table 2 shows annual cost of OAB. Median of total annual cost of OAB was Rp. 2,850,000,-. Median of total personal cost was Rp. 2,850,000. Median of total cost expended by government for routine personal and treatment of OAB was Rp.2,500,000,-

DISCUSSION

Overactive bladder is defined by the International Continence Society as a disorder of filling/storage in which...
involuntary bladder contractions are demonstrated while the patient is attempting to inhibit (ICS, 1988). It is a common and distressing cause of poor bladder control in adults, affecting at least 50 million people in developed countries.¹

The symptoms of overactive bladder can be extremely debilitating. As a direct result of these symptoms individuals often experience a range of social, psychological, domestic, occupational, physical and sexual problems, which include depression, sleep disturbances, reduced social interaction, absence from work, and avoidance of physical activity. Quality of life is thus significantly impaired.² The impact of overactive bladder on the quality of life has been emphasized. The data demonstrated lower quality of life scores among individuals with OAB than in those with diabetes or hypertension.³

Currently, symptoms of OAB and its impact on patients’ quality of life can be assessed in a number of ways. Traditionally, the clinical history has been used to gain a summary review, but increasingly greater attention is being devoted to methods of collecting data which rely more directly on the patients’ perspective of their predicament. Thus voiding diaries and self-completion questionnaires are being used increasingly in research and clinical practice in this and related areas.⁴

In this study, we used OABq-questionnaire which was developed by Pfizer to assess symptoms of OAB and patients’ quality of life. The maximum score of symptom severity was 98.8. The median score of symptom severity in this study was 62.5 which means that the symptom was quite severe. Most of subjects felt uncomfortable with their voiding, especially at night. But, there were 13.3% of subjects who did not feel uncomfortable with their voiding at night. This group of subjects were those who used sanitary towels or incontinence pads.

Despite the considerable impact of these symptoms, many patients do not seek medical help. This might be due to embarrassment or the mistaken belief that nothing can be done to alleviate symptoms. A study conducted in the United States revealed that the most common reason for not seeking treatment is the perception that their symptoms are part of the normal aging process. Others may be unaware that they have a medical problem, may not know that treatment is available, or may have had poor experience with previous management programmes.

Many people with OAB adopt a range of strategies to cope with their condition. Such strategies include voiding frequently, mapping out the location of public toilets, restricting their fluid intake or wearing dark clothing so that urinary leakage is less visible. Others enduring the inconvenience and unpleasantness of poor bladder control for decades, managing their conditions as best as they can by wearing sanitary towels or incontinence pads.

Quality of life in this study was divided into coping, concern, sleep, and social aspects. The maximum score of quality of life was 99.8. Median score of total quality of life in this study was 44.7, which means that quality of life in this study was somewhat poor. Coping as one of the component in quality of life score in this study had median score of 50.0, which means half of the subject in this study tried to cope with their condition. Most of subjects cope with their condition by mapping out the location of public toilets and reduced physical activity. Median score of social activity was the lowest score in the component of quality of life. OAB influences on social interaction of subjects in this study. Most subjects reduced their social activity and preferred to stay at home most of their time.

Study done by Grimby which assessed the quality of life of 120 urinary incontinence in elderly women and 313 women in control group showed that women suffering from incontinence obtained higher scores in the domain of emotional disturbances (p<0.05) and social isolation (p<0.05) than women from the control group. The quality of life in this study was assessed by the

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<th>Table 3. Annual Cost of OAB</th>
<th>Mean (sd)</th>
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<td>(Rupiah)</td>
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<tr>
<td>Personal cost</td>
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<td>- Routine personal care costs</td>
<td>2.152.133</td>
<td>2.720.000</td>
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<tr>
<td>- Treatment costs</td>
<td>1.438.722</td>
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<td>- Total costs</td>
<td>3.015.367</td>
<td>2.850.000</td>
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<td>Government cost</td>
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<td>- Routine personal costs</td>
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<td>- Total costs</td>
<td>2.850.000</td>
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<td>Total costs (personal + government costs)</td>
<td>3.098.700</td>
<td>2.850.000</td>
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⁴ Pfizer
Nottingham Health Profile Questionnaire. Women suffering from urge and mixed incontinence reported emotional disturbances (p<0.05) more than the control group. Women suffering from urge incontinence reported more disturbance of sleep (p<0.05) than in the control group. Sleep as one of the component in quality of life score in our study has median score of 50.8. Most of subjects felt OAB disturbing their sleep often; they had to wake up at night to go to the toilet. Subak had also done this study to estimate health related quality of life in 293 urinary incontinence women. Health related quality of life was estimated with the Health Utility Index. This study found that more frequent incontinence was associated with lower Health Utilities Index score.6

Cost of illness for urinary incontinence has been addressed by several studies, most of which focus on a particular subpopulation (gender, age, or institutionalization status), type of incontinence (stress, urge, mixed, neurogenic), or cost type (direct, indirect).7,8 To determine the economic cost of OAB in this study, we only evaluate the direct cost. Direct costs associated with OAB consisted of diagnostic costs (laboratory tests, physician consultations, and urodynamic evaluation), treatment costs (medication, behavioral therapy, devices), routine personal care costs (incontinence day pads, disposable bed pads, hygiene products, and laundry), and other costs (transportation). Table 3 presents annual costs of OAB which consist of personal costs and government costs. Median annual cost of OAB in this study was Rp. 2,850,00,-. Detailed analyses on costs of OAB showed that routine personal care costs were much higher than the costs of treatment costs. This results is not the same as the study done by Wilson in The United States which found that treatment costs were much lower than the costs of routine care.9

A majority of treatment costs and routine personal costs in our study were paid out of pocket by subjects and not reimbursed by third party payers. This placed a large cost burden directly on individuals, most often the elderly, who were adversely affected by disease as well as the cost of care. Appropriate diagnosis and treatment of OAB in the community, especially for those people at greatest risk of permanent institutionalization may decrease the cost burden on society. Estimation of the annual direct costs of incontinence in The United States were $16.3 billion.9 The recent study in The United States showed that women with severe urinary incontinence paid $900 annually for incontinence routine care.6

Annual cost analyses of OAB in this study have several limitations. There are few data on routine care costs of OAB. The effects of OAB on indirect costs are not included in this analysis, probably resulting in an underestimation of costs.

Feeling of embarassment and limited understanding of the pathophysiology of OAB can contribute to miscommunication between a woman and her doctor. Patient education regarding reasonable expectation coupled with suggestion for coping with unwanted side effects will likely result in better management.10

CONCLUSION
This study shows that median total annual cost of OAB was Rp. 2,850,000,-. Quality of life of OAB patient was somewhat poor. The findings of this study may provide a working basis for the future research on OAB among Indonesians and for creation of effective healthcare policies that will address it.

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REFERENCES