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Original Article

Adherence of Indonesian urologists to practice guidelines for the management of benign prostatic hyperplasia

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ABSTRACT

Background: Clinical guideline is built to provide consistent, efficient, and high quality of medical care based on recent evidence. This study aimed to investigate the adherence of Indonesian urologists to clinical guidelines for the management of benign prostatic hyperplasia (BPH).

Materials and methods: This was a cross-sectional study using questionnaire conducted between January and June 2017. Respondents were Indonesian urologists registered as members of Indonesia Urological Association and had already practice in urology for at least 6 months. Questionnaires were sent via e-mail and Google Form. The level of adherence was measured using scoring system decided by authors' agreement. All data were processed using SPSS, version 23, and presented in descriptive fashion. **Results:** Of 352 urologists who fulfilled inclusion and exclusion criteria, 209 (59.4%) respondents returned the questionnaire. Most of respondents (95.2%) used Indonesia Urological Association BPH guidelines as their clinical practice guidance. Routinely performed recommended examination, such as symptom scoring system, digital rectal examination, urinalysis, uroflowmetry, postvoid residual urine, and prostate imaging were used by 89.9%, 92.5%, 70.4%, 50.8%, 53.3%, and 98.6% respondents, respectively. After patient is diagnosed with BPH, most of respondents considered medical therapy (99%), surgical therapy (93%), and watchful waiting (78.4), with alpha-blocker as the drugs most preferred by respondents. For indication to perform surgery for BPH, only bladder stones, decreased renal function, and trial without catheter failure were considered by more than 85% of respondents. Open prostate surgery was performed by 54.8% respondents for the following reasons: large prostate volume, presence of bladder stone, unavailability of endourology equipments, abnormality of bladder, and residency training program. At last, this study found median (minimum–maximum) of Indonesian urologists adherence level toward BPH guidelines is 78.5% (28.6%–100%).

Conclusions: In general, Indonesian urologists have a good adherence toward guidelines. However, there is still wide variation of their adherence to it.

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1. Introduction

Benign prostatic hyperplasia (BPH) is a progressive disease, and its increase in prevalence is parallel to age with an increased risk of 4% each year.^{1–3} It is a pathological diagnosis, and an autopsy study showed that its prevalence is 8% in the 4th decade of life, 50% in the 6th decade of life, and 80% in 9th decade of life.^{4,5} This disease leads to bladder outlet obstruction resulting in lower urinary tract symptoms (LUTSs) and other clinical complications, such as urinary

tract infection, hematuria, urinary stone disease, and urinary retention, and sometimes causing loss of sleep and depression.⁶ However, the impact of the disease is not only due to problems mentioned above which lead to a decline in patient's quality of life but also due to its significant cost. In the United States, it has been estimated that this disease cost \$4 billion annually.⁷

To solve those problems, guidance is required to provide consistent and efficient clinical practice. Clinical guidelines could be the key to solve the problem.⁸ Currently, numerous practice guidelines on BPH exist. However, implementing these guidelines in clinical practice is not always successful, and variations occur in clinical practice.^{9,10} The difference are related to urologist preference or beliefs, cost, and available medical resources.¹⁰ A study by Strope et al showed that variation existed for BPH evaluation. This

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variation was influenced by location, urologist's experience, and resources.¹¹

To provide a quality health care that is based on the latest evidence and recommendation, the Indonesian Urological Association (IUA) has updated its 2003 clinical guidelines on BPH in 2015.¹² The updated guidelines have included level of evidence and grade of recommendation for the management of BPH. It is hoped that with updated guidelines, Indonesian urologists will provide the best possible care for patients, attuned to the available resources.

To date, it is not known about how Indonesian urologists use and comply with the IUA BPH clinical guidelines. In this study, we will investigate the adherence of Indonesian urologists to clinical guidelines for the management of BPH.

2. Methods

2.1. Study's design and population

This was a cross-sectional study conducted between January and June 2017. Respondents had to be registered as urologist under the IUA database and had already practiced urology for at least for 6 months when the data were collected. Urologists who no longer practice were excluded from this study.

2.2. Data collection

Data were collected using questionnaires which were distributed in a national urology symposium (8th Uro Oncology update held between 9–11 February 2017) and electronically via e-mail and Google Form. Google Form link was sent as a part of e-mail and through short message service (SMS)/chat message (Whatsapp messenger application) to every individual who fulfills inclusion and exclusion criteria between April and June 2017. Urologists' e-mail and phone number were obtained from IUA database. Advance notifications were sent through an e-mail and SMS/Whatsapp messages, 1 week before the first e-mail. Follow-up and reminder were done every 2 weeks for four times using e-mails and SMS/Whatsapp messenger. Respondents had to fill out their name in the questionnaire or had to be identifiable to further be included in this study and to prevent data duplication. Respondent's confidentiality was guaranteed, and privacy policy statements were stated in the introduction of the questionnaire.

2.3. Study's questionnaire and its investigation

The questionnaire was constructed using Indonesian language and was divided into two sections which are questions regarding respondents' demographic characteristics and BPH management.

BPH management questionnaire consists of eight questions as follow: respondent's guidance for BPH management; diagnostic tools used; type of therapy given; selection of medical therapy given for the first time; indication of BPH surgery; whether the respondents are performing open surgery and their reasons; first time evaluation after therapy given; and examination performed when evaluation. All the questions were multiple choice questions and respondents could choose more than one answer except for question: *first time evaluation after therapy given*. Respondents may also provide their own answer apart from the given option for the following questions: diagnostic tools used; type of therapy given; reasons to do open surgery; first time evaluation after therapy given; and examination performed when evaluation. All of the choices given in the questionnaire were based on IUA BPH guideline's key recommendations.

IUA BPH guidelines divided examination into routinely performed examination and optional examination. Examinations

considered as routinely performed examination are scoring system, digital rectal examination (DRE), urinalysis, uroflowmetry, postvoid residual urine (PVR), and prostate imaging that was further divided into transrectal ultrasound (TRUS) and transabdominal ultrasound (TAUS). Meanwhile, examinations that are considered as optional examination are kidney function test, prostate-specific antigen (PSA) test, urinary tract imaging, urethrocystoscopy, and urodynamic test. Furthermore, these guidelines also divided the indication to perform surgery for BPH patient into absolute indication, such as acute urinary retention, trial without catheter (TWOC) failure, recurrent urinary tract infection, retractable macroscopic hematuria, bladder stone, decreased renal function due to obstruction caused by BPH, and pathological change of bladder and upper urinary tract, and relative indication, such as moderate–severe International Prostate Symptom Score (IPSS), no improvement after nonsurgical treatment, and patient preference.

Before the questionnaire was distributed, it underwent reliability test using test–retest reliability, and it had reliability coefficient more than 0.9 in all questions.

2.4. Data measurement and presentation

To measure adherence, a scoring system was developed according to authors' agreement. Every examination which is recommended to be routinely performed by IUA BPH guidelines was given a score +1 if it was offered by urologist. However, for other examination which is considered optional by IUA BPH guidelines, the given score was 0. Score 0 will be given to all optional medical therapies chosen by urologists based on IUA BPH guidelines, except for phytopharmaca which is not recommended by IUA BPH guidelines and score -1 will be given to every urologist who offered this therapy to patient. Moreover, urologists were given a score +1 for offering surgical therapy to absolute indications. To the urologist who performed open surgery, score +1 was given if the indication to do open surgery was large prostate volume, but score -1 was given for other indications. Therefore, the maximal score which can be achieved by each urologist is 14, and level of adherence will be determined by percentage of total score obtained by the urologist divided by maximal score.

Data were presented in descriptive fashion. Categorical data were presented as absolute value and its percentage. Several categorical data were presented as charts. Numerical data were presented as mean and standard deviation if the data had normal distribution or as median and range if the data did not have normal distribution. All of the data were processed using Statistical Package for the Social Science (SPSS), version 23.

The data were divided based on the first question in BPH management session which is respondent's guidance for BPH management. Only respondents who claimed to use IUA BPH guidelines as their BPH management guidance were taken into account for other questions.

2.5. Study's ethical committee approval

This study was approved by the Faculty of Medicine, Universitas Indonesia Ethical Committee: 976/UN2.F1/ETIK/2016.

3. Results

Of 352 respondents who fulfilled inclusion and exclusion criteria, 209 (59.4%) respondents returned the questionnaire. Demographic characteristics of respondents returning the questionnaire were presented in Table 1. Indonesian urologists could practice in three different hospitals, and this explained why the

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