Knowledge and Practice Regarding Prevention of Renal Calculi among Non Teaching Staffs of a Selected College of Health Sciences at Mangaluru

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Abstract

Background and Aim: Mankind has been afflicted by urinary stones and is the most common disease of the urinary tract. It affects all ages, sexes, and races but occurs more frequently in men than in women within the age of 20–49 years. Generally, to prevent the first episodes of kidney stone formation or its secondary episodes, proper management of diet is required. The study aim to assess the correlation between knowledge and practice regarding prevention of renal calculi among Non teaching staffs.

Methods: A descriptive correlation approach was adopted for the study and by purposive sampling technique 95 non-teaching staffs were selected. The data was collected using demographic proforma, structured knowledge questionnaire and Rating scale. Collected data were analyzed by Descriptive and Inferential statistics using SPSS version16.0.

Results: Results showed that majority (75.8%) of the subject had average knowledge and 72.6% of the subjects had good practice towards the prevention of renal calculi. There was a significant correlation ($p<0.05$) between knowledge and practice among non-teaching staffs regarding the prevention of Renal calculi.

Conclusion: The study concluded Non teaching staffs had average knowledge and good practice towards prevention of renal calculi.

Key words: *Knowledge, Practice, Non teaching staffs, Renal calculi*

Introduction

Globally, kidney stone disease prevalence and recurrence rates are increasing, with limited options of effective drugs. Urolithiasis affects about 12% of the world population at some stage in their lifetime. It affects all ages, sexes, and races, but occurs more frequently in men than in women within the age of 20–49 years. In Indian population, about 12% of them are expected to have urinary stones and out of which 50% may end up with loss of kidney functions.[1]

Mankind has been afflicted by urinary stones and is the most common disease of the urinary tract. Kidney stone, also known as urolithiasis, is when a solid piece of material formed within the urinary tract. Kidney stones typically form in the kidney and leave the body through the urine stream.[2]

The stone formation include anything that either causes stasis or supersaturation of the urine. Immobility and a sedentary lifestyle, which increases stasis. Dehydration, which leads to supersaturation. Metabolic disturbances that results in an increases in calcium or other ions in the urine. Previous history of urinary

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calculi. living in stone-belt areas, high mineral content in drinking water, a diet high in purines, oxalates, calcium supplements, animal proteins, urinary tract infections, prolonged indwelling catheterization, neurogenic bladder, history of female genital mutilation also play a role in kidney stone formation.[2]

Effective kidney stone prevention depends upon addressing the cause of stone formation. Generally, to prevent the first episodes of kidney stone formation or its secondary episodes, proper management of diet and the use of medications is required. Primary prevention of kidney stone disease via dietary intervention is low-cost public health initiative with massive societal implications. Thus nutritional management is the best preventive strategy against urolithiasis.[1]

Good voiding habits, particularly frequent urination, and regular exercise are useful in preventing the stones from forming. Most importantly, a high fluid intake should be maintained at all times, especially during hot, dry weather when the risk of kidney stone formation is greatest. Therefore, of all the preventive recommendations is the most important guideline for people with any type of kidney stones. Hence the awareness regarding the prevention of renal stone is necessary to prevent the occurrence and also helps to modify the life style pattern.[1]

Material and Methods

A Descriptive correlational research is being conducted in Yenepoya Nursing college, Karnataka, India after obtaining the ethical clearance(Protocol no 2019/024) from Institutional Ethics Committee, Yenepoya(Deemed to be University). Nonteaching staffs between the age group of 20-49 years were included in the study and who had a previous history of renal calculi were excluded. 95 Non teaching staffs were selected by Non-probability purposive sampling technique. Informed consent was obtained from the respondents after proper explanation about the purpose, the usefulness of the study and assurance was given about the confidentiality of their responses. Data was collected by using structured knowledge questionnaire and self reported rating scale.

The data were analyzed by descriptive and inferential statistics using SPSS version 16.0. Demographic variable, knowledge questionnaire, rating scale will be analyzed using the descriptive Statistics such as Frequency, Percentage, Mean and Standard Deviation. To correlate the knowledge and practice score of non teaching staffs, Karl Pearson co- relation co-efficient will be used. Chi-square test was used to find the association between the Knowledge and practice score with selected demographic variable

Results

Description of sample characteristics:

Frequency and percentage distribution was computed to describe the sample characteristics. The baseline sample characteristics of the participants showed that majority (31.57%) of the subject belongs to the age group of 20-30 and majority (82.1%) of the subjects was females. Majority (58.8%) of the subjects belongs to Hindu religion, and most (58.4%) of the subject had completed Degree. Majority of the subjects (56.8%) were resides in rural area and most (90.5%) of the subjects are non-vegetarian. Majority of the subjects (49.5%) had previous information through internet .

Table 1: Frequency and percentage distribution of non teaching staffs according to the grading of their knowledge score.

n=95

Classification	Frequency	Percentage (%)
Poor Knowledge	5	5.3
Average Knowledge	72	75.8
Good Knowledge	18	18.9

Table 1 shows that Majority (75.8%) of the subjects had average knowledge, 18.9% of the subjects had good knowledge and only 5.3% of the subjects had poor knowledge.

Practice of Non teaching staffs regarding prevention of renal calculi.

n=95

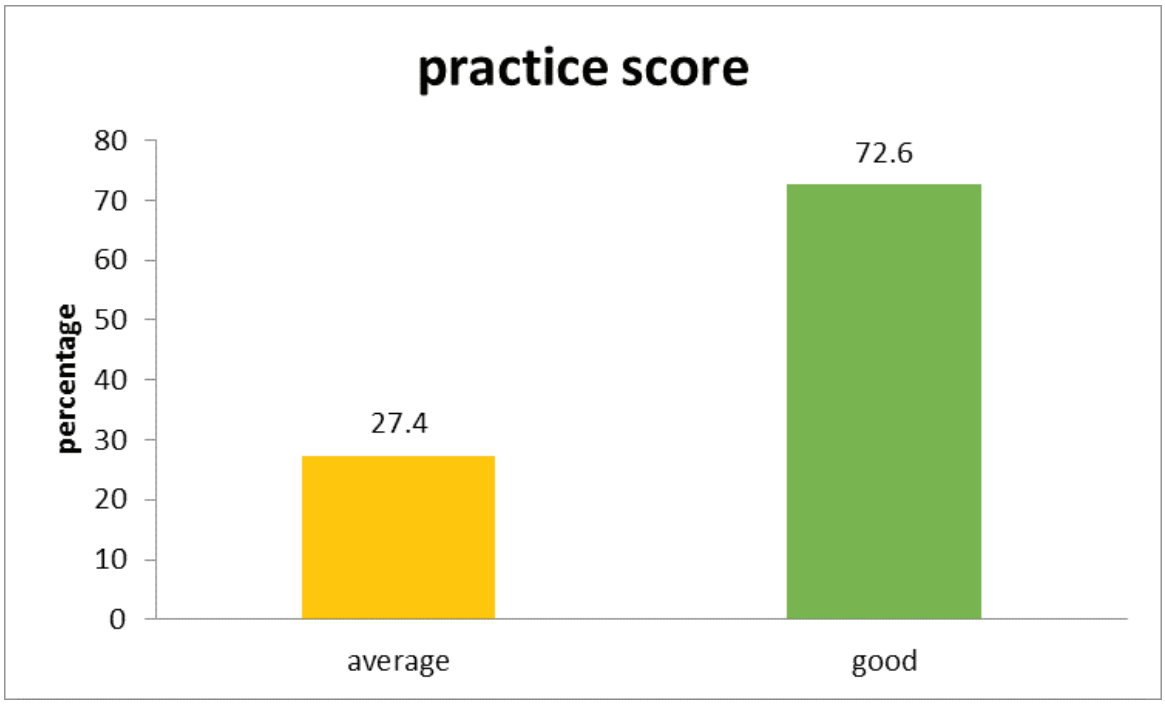

Figure 1: Bar graph showing the distribution of level of practice score of non teaching staffs.

Data presented in the Figure 1 shows that majority (72.6%) of the subjects had good practice and 27.4%ofthe subjects had average practice.

Correlation between knowledge and practice regarding prevention of Renal calculi.

Karl Pearson correlation coefficient was used to correlate the knowledge and practice score of non teaching staffs. There was a positive correlation between knowledge and practice score of non teaching staffs regarding prevention of renal calculi among non teaching staffs (p =0.027).

Association between knowledge score with selected demographic variables

Chi square association with knowledge score indicated that there is significant association between knowledge and demographic variable i.e, education (χ^2=0.017), P< 0.05. The findings also revealed that age, gender, religion, residence, dietary pattern, previous information from the internet, health professionals in the family was statistically non significant at 0.05 level.

Association between Practice score with selected demographic variables

Chi square association with practice score indicated that there is no significant association between practice and demographic variable .

Discussion

This study was designed to collect information regarding knowledge and practices of renal calculi among nonteaching staffs. Results indicate that the non teaching staffs had average knowledge regarding renal calculi. This findings are supported by a study conducted by Soni GP (2016) on Prevention of Renal Calculi in Terms of Knowledge and Dietary Pattern among Primary School Teachers of Moodabidri, Dakshina Kannada District . Findings of the study showed that less number of primary school teachers had adequate knowledge regarding renal calculi and its prevention.[3]

Practice of non teaching staffs regarding renal calculi was better than their knowledge. Majority (72.6%) had good practice towards the prevention of renal calculi. This findings are supported by a descriptive cross sectional study (2017) was conducted in the University of Peradeniya, Sri Lanka to determine knowledge, attitude and practices regarding urinary tract stones among final year medical students ,which showed that majority(55.55%) of them had a good practice towards the prevention of renal calculi.[4]

In the present study positive correlation was observed between knowledge and practice. Supportive to this findings, Pethiyagoda et al conducted (2015) a study revealed that There was a correlation between knowledge level and Practice.[5]

This study finding revealed that there was no significant association between knowledge score and practice score with demographic variables. Supportive to this study ,Bakunts V conducted a study (2011) on Knowledge, Attitude and Practice of Kidney Stone Formers in Armenia regarding Prevention of Kidney Stone Disease which revealed that there was no significant association between knowledge and practice score with selected demographic variable.[6]

Conclusion

Renal calculi is a global health problem that seriously affects human health. Prevention plays a major role in controlling the incidence of renal calculi. In conclusion, findings indicated that Non teaching staffs had average knowledge and good practice towards prevention of renal calculi.

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Conflict of Interest: All the authors declare that they have no conflict of interest.

Informed Consent: Informed consent was obtained from all the study participants

Ethical Approval: Obtained the ethical clearance from Institutional Ethics Committee, Yenepoya(Deemed to be University) (Protocol no 2019/024).

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References

1. Alelign T. Petros B. Kidney Stone Disease: An Update on Current Concepts. Advances in Urology. 2018. Available from: https://doi.org/10.1155/2018/3068365
2. Joyce M. Text book of Medical-Surgical Nursing. 8th ed. India: Elsevier; 2009.507-508.
3. Soni GP. A Study to Evaluate the Effectiveness of

Planned Teaching Program Regarding Prevention of Renal Calculi in Terms of Knowledge and Dietary Pattern of Primary School Teachers of Moodabidri, Dakshina Kannada District. J Mahatma Gandhi Univ Med Sci Tech 2016;1(2):55-57. Available from: http://www.jaypeejournals.com/eJournals/Show Text.aspx?ID=10815&Type= FREE&TYP=TOP& IID=831&Value=54&isPDF=YES

4. Kapukotuwa AUBPKP. Survey on knowledge, attitudes and practices on urolithiasis among final year students in Faculty of Medicine, University of Peradeniya.International Journal of Scientific and Research Publications. 2017;7(2):295–300. Available from: http://www.ijsrp.org/research-paper-0217/ijsrp-p6244.pdf
5. AUB Pethiyagoda, K Pethiyagoda , KC Kapukotuwa. Survey on knowledge, attitudes and practicesonurolithiasis among final year students in Faculty of Medicine, University of Peradeniya.2017:7(1);295-301. Available from; http://www.ijsrp.org/research-paper-0217.php?rp=P626214
6. Bakunts V. Knowledge, Attitude and Practice of Kidney Stone Formers in Armenia Regarding Prevention of Kidney Stone Disease.2011; Available from: http://aua.am/chsr/UserFiles/File/new/Vahe Bakunts.pdf