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THE PROFILE AND UROLOGICAL SERVICE NEEDS OF OUTPATIENTS ATTENDING A TERTIARY CENTRE IN WESTERN KENYA

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## THE PROFILE AND UROLOGICAL SERVICE NEEDS OF OUTPATIENTS ATTENDING A TERTIARY CENTRE IN WESTERN KENYA

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### ABSTRACT

**Background:** Urological service needs cut across varied ages and related conditions. The outpatient attendance is a reflection of the common conditions constituting the urological burden of a given population (1). The urological burden in turn has implications on access to care and treatment (2) since it will determine the skills needed, mode of treatment, amount of time and other resources required to meet these needs. There is, therefore, a need to have a local data base on the profile of our urological patients and their needs with regard to modes of treatment. This study strives to and meets this important objective.

**Objective:** To establish the epidemiology of outpatient urology patients and their service needs as seen in a tertiary centre in the Western region of Kenya.

**Design:** Hospital based observational, descriptive, prospective, cross sectional study.

**Setting:** The Urology Outpatient clinic of Moi Teaching and Referral Hospital (MTRH), a 750 bed tertiary centre in the Western region of Kenya catering for approximately half of the Kenyan population.

**Subjects:** Ninety-four first time attendees to the urology clinic seen in the year 2011.

**Main outcome measures:** The primary outcome measures were the demographic data and diagnosis while the secondary outcome measure was the urological service needs of the patients in terms of treatment as to whether surgical or medical at presentation.

**Results:** Ninety-four patients attended the urology clinic for the first time in the year of study. The male to female ratio was 14.7: 1. Age ranged from one year to 97 years with a mean  $\pm$  standard deviation of  $48.0 \pm 25.3$  years. Half were below and half were above 50 years of age. Males had longer durations of symptoms compared to females but the difference was not statistically significant ( $p = 0.131$ ). The top three urological problems were urethral strictures, prostate diseases and Urinary Tract Infections. There was an overall 70.2% need for surgical interventions with twenty-six point one percent of the prostate disorders being managed medically while all urethral strictures were planned for surgery. The odds ratio for surgery after one year compared to within first year of symptoms was two.

**Conclusion:** The urological patients attending this tertiary outpatient clinic are predominantly males and are widely spread out in terms of age and diagnosis. The clinical burden of urethral strictures has overtaken that of prostate diseases in this tertiary centre.

### INTRODUCTION

In the developing world, urological services are in the infantile stage even as we increasingly realise that managed care has to focus on a growing population aged 50 years and above for whom urological needs range high in the top ten health conditions(1). The urological burden has implications on access to care and treatment(2) since it will determine the amount of

time and other resources required to meet the needs. With underdeveloped urological services even in the Western countries (3), it becomes necessary to have an understanding of the commonly encountered problems and the general distribution into outpatient and inpatient care (4).

The Moi Teaching and Referral Hospital (MTRH) is the second referral hospital in Kenya after Kenyatta National Hospital (KNH) in Nairobi. It caters for

close to half of the nation's population with referrals drawn from government, mission and private health institutions spread across much of western Kenya. Information gathered from this hospital would provide important data on the state of urology and its practice not only in this region but also in the country.

This paper, therefore, shares the findings on the profile and the urological service needs of outpatients seen in this tertiary centre in the Western region of Kenya in an effort to bridge the knowledge gap regarding our local situation.

## MATERIALS AND METHODS

First time attendees of the urology outpatient clinic in the Moi Teaching and Referral Hospital (MTRH) were evaluated for the key data on demography, presenting problems and modes of treatment. This data was collected by the author both during the seeing of the patient as well as cross-checking the files for the relevant data and patients consented to their information being used for purposes of the study. The primary outcome measures were the demographic data and diagnosis while the secondary outcome measure was the urological service needs of the patients in terms of treatment as to whether surgical or medical at presentation.

Data thus extracted was transferred to a spreadsheet, confirmed for completeness and subsequently entered into a computer using the Scientific Programme for Social Studies (SPSS) software version 17.0. Data analysis was in line with the main outcome measures and was done using descriptive as well as inferential statistics. A 95% confidence interval was assumed and statistical

significance was at  $p$  value  $\leq 0.05$ .

## RESULTS

Ninety-four patients attended the urology clinic for the first time in the year of study. The male to female ratio was 14.7:1. Age ranged from one year to 97 years with a mean  $\pm$  standard deviation of  $48.0 \pm 25.3$  years. Majority (35.1%) were in the 51-75 years age group even though the patients were evenly distributed with half below and the other half above 50 years of age. Table 1 shows the gender and age distribution of the patients.

The duration of symptoms varied from under one month to five years with close to three-quarters of the patients (73.4%) presenting within the first year. Four point three percent of the patients had no urological problem and had symptoms of up to two years at presentation. Males had longer durations of symptoms compared to females but the difference was not statistically significant ( $p = 0.131$ ).

The top three urological problems were urethral strictures (43.6%), prostate diseases (24.5%) and Urinary Tract Infections (13.8%). Table 2 shows the diagnosis and respective durations of symptoms as seen in the clinic and depicts urethral strictures as the main cause of symptoms lasting more than 4 years. There was an overall 70.2% need for surgical interventions. The odds ratio for surgery after one year compared to within first year of symptoms was two. Table 3 shows the presenting problem and presumed mode of treatment at first consultation. Twenty-six point one percent of the prostate disorders were managed medically while all urethral strictures were planned for surgery.

**Table 1**  
*The gender and age distribution*

Gender	Age group in years				total
	0-25	26-50	51-75	>75	
Male	20	25	31	12	88
Female	02	02	02	0	06
Total	22	27	33	12	94

**Table 2**  
*Diagnosis and duration of symptoms*

Diagnosis made	Duration of symptoms in months					Total
	≤12	13-24	25-36	37-48	49-60	
Prostate diseases	21	1	1	0	0	23
Urethral strictures	25	5	1	1	9	41
Renal stones	3	0	0	0	0	3
Bladder tumours	2	0	0	0	0	2
Hydroceles	4	0	1	0	3	8
Urinary Tract Infections	12	0	0	0	1	13
Non-urological	2	2	0	0	0	4
Sum total	69	8	3	1	13	94

**Table 3**  
*Diagnosis and modes of treatment*

Surgery done	Diagnosis made							Total
	Prostate diseases	Urethral strictures	Renal stones	Bladder tumour	Hydroceles	UTI	Non-urological	
Yes	17	41	1	2	5	0	0	66
No	6	0	2	0	3	13	4	28
Total	23	41	3	2	8	13	4	94

## DISCUSSION

Outpatient care services are a reflection of the whole healthcare system since it incorporates the entry point for inpatient services as well as the indicated follow-up of those either previously admitted or those not in need of inpatient care. A peek into the outpatient services would, therefore, give an insight into the common medical problems in a given discipline (1). This study has similar demographic features to one done on inpatients in the same institution two years earlier and confirms the generally accepted knowledge that urology is a specialty dealing predominantly with males (5).

Given the varied ages and conditions for which urological visits encompass, one would understand the variation in the duration of symptoms. Murugunandham and colleagues in India noted an average of 32 months (6) and this fits favourably within this study's range of up to five years. The finding that 4.3% of the patients had no urological problem is impressively less than a German study's finding that up to 20% of patients are inappropriately assigned specialty clinics (7). This might be explained by the filtering process with a higher scrutiny for sub-specialties as opposed to general disciplines.

Prostate disease has been known to be the leading problem in urology practice (8-9) but urethral strictures have also been noted to be comparatively

in the rise in the developing world. A retrospective five years' study covering up to two years ago in this same institution had prostate as the leading cause for surgical intervention closely followed by urethral strictures (5). It is logically possible as depicted in this prospective study that with a predominantly younger population than in the European studies, urethral strictures have over time claimed the leading position in the urological burden in this tertiary centre. This is a trait that had also been noted in the neighbouring country of Tanzania (10).

Urology covers a wide spectrum of conditions that can be effectively managed either medically or surgically. Prostate enlargement was previously treated surgically on a routine basis but is now treated successfully with medications in well selected patients. John and his colleague had a 20% surgical rate for Benign Prostate Hyperplasia (BPH) (11), comparing well with this study's overall surgical intervention in 26.1% of the prostate conditions.

## CONCLUSION

The urological patients attending this tertiary outpatient clinic are predominantly males and are widely spread out in terms of age and diagnosis. The clinical burden of urethral strictures has overtaken that of prostate diseases in this tertiary centre.

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