ORIGINAL ARTICLE

AETIOLOGICAL PATTERN OF BLADDER OUTLET OBSTRUCTION ADMISSIONS IN A NIGERIAN UROLOGY CENTRE.

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ABSTRACT

Background: Bladder outlet obstruction (BOO) is globally the foremost urologic disorder that affects all ages. However, the volume and diversity of lower urinary tract lesions causing BOO and warranting inpatient care in our community is unknown.
Objective: To retrospectively review the aetiology, interventions and outcome of BOO admissions at Abubakar Imam Urology Centre Kano as a foundation for further urologic care capacity building and upgrading in Nigeria.
Materials and Method: A three-year retrospective appraisal of all the patients admitted and managed for BOO at Abubakar Imam Urology Center Kano (AIUC). The Information extracted from patient's records included the patient's biodata, diagnosis, intervention, duration of Hospital stay and the outcome. The Data were evaluated using SPSS version 21.
Conclusion: The study revealed benign prostate hypertrophy (BPH) was the most prevalent lesion among the inpatients; its complications and bladder cancer progression are the most common causes of mortality. The study highlighted the need for revamping health planning and capacity development focused on the quartets of greater pleasant outcome, a shorter admission stay, less treatment spending plus patient's satisfaction.

KEYWORDS: Aetiology, Bladder outlet obstruction, Inpatients, Admissions, Nigerian.

INTRODUCTION

Bladder outlet obstruction (BOO) is an outright or partial hindrance in the conduit of urine through the urinary bladder neck to exterior. (1) It is globally the foremost urologic disorder that could affect all ages and its aetiological factors tops among ample of the urologic causes of morbidities and mortalities[2,3]. BOO usually presents as difficulty in micturition and commonly characterised by lower urinary tract symptoms that may negatively affect the quality of life[4,5].BOO results from heterogeneous causes with diverse epidemiology and natural history as well as respective uniqueness as per treatment and prognosis[3]. The hospital based reviews on the pattern of urologic disorder in the developing world often substitute for the sparse community-based records[2,6]. This strategize urological care capacity building and serves as the needed requisite for health care planning. The analysis of volume and diversity of lower urinary tract lesions causing BOO among the urological patients that merit inpatient care is also not readily available for most communities in the developing world including ours. This study, therefore, aimed to retrospectively review the aetiology, interventions and outcome of BOO admissions at Abubakar Imam Urology Centre Kano over a three-year period as a substructure for further urologic capacity building and upgrading in Nigeria.

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MATERIALS AND METHOD

This was a three-year retrospective appraisal of all the patients admitted and managed for bladder outlet obstructions at Abubakar Imam Urology Center Kano (AIUC) between January 2012 and December 2014. Ethical clearance was obtained from the hospital ethics committee.

The hospital records of these inpatients were retrieved from the central computerized admissions records. The Outpatients, patients only managed in the accident and emergency department plus patients that left against medical advice were excluded from the studies. The Information extracted included each patient's biodata, diagnosis, intervention, duration of Hospital stay and the outcome. The Data were evaluated using SPSS version 21[7].

RESULTS

There were 1,504 inpatients with varied urological conditions during the study period. Of these 1090 (72.47%) were due to BOO managed and most followed up for a varied period. The males accounted for 98%. The mean age in the study was 58.4yr (±19.1).

The modal age group was 61 to 70 as seen in fig.1. Majority of the patients are Hausa/Fulani by tribe (97.6%) as shown in fig. 2. Businessmen formed 33.1% of all patients, followed by those that are not gainfully employed and Farmers as depicted in fig 3. The most common cause of BOO in this study was BPH as shown in fig 4. It accounts for 664(60.9%) of BOO admissions, out of whom 18(2.7%) patients had associated complications at presentation requiring additional surgical intervention as shown in Table 1; predominantly bladder calculi. Urethral stricture with 13.6% prevalence was the second highest after BPH.

The mean Hospital stay was 9.9 (±6.2) days with a range of 1 to 61 days. Mortality recorded during the study period was 8.3%. Most of these mortalities are those admitted with complications of urosepsis and uraemia or advanced cancers progression particularly bladder cancer which had the highest case specific death rate as shown in fig 5.

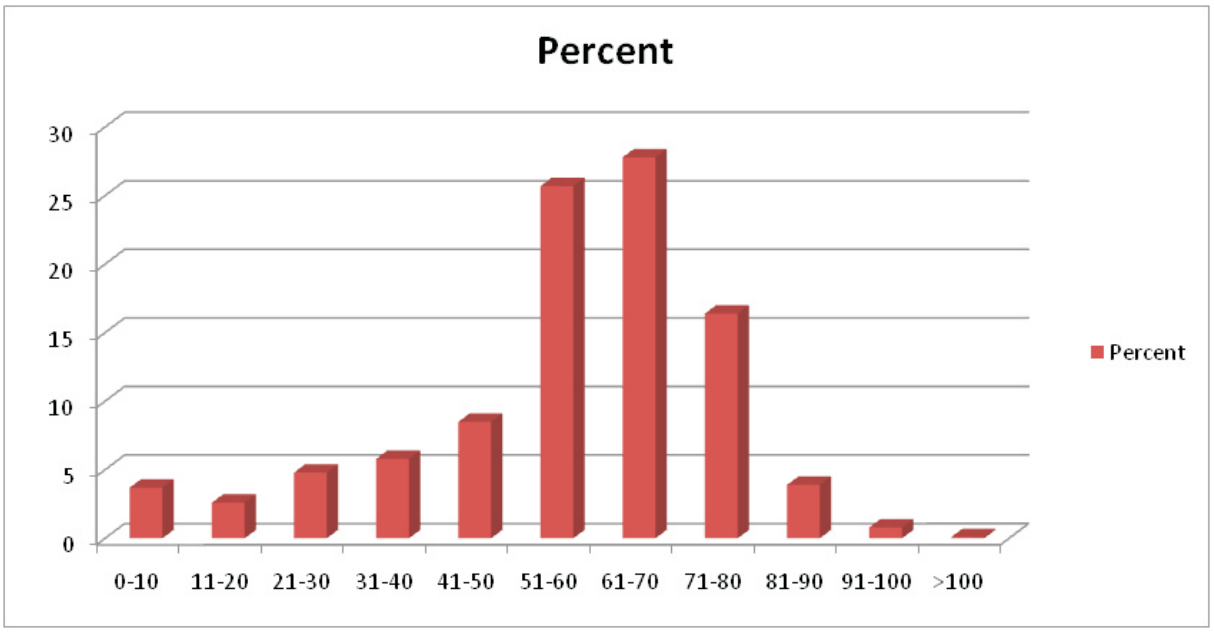


Figure 1. Age Distribution of Inpatients With BOO Managed At AIUC Between January 2012 And December 2014

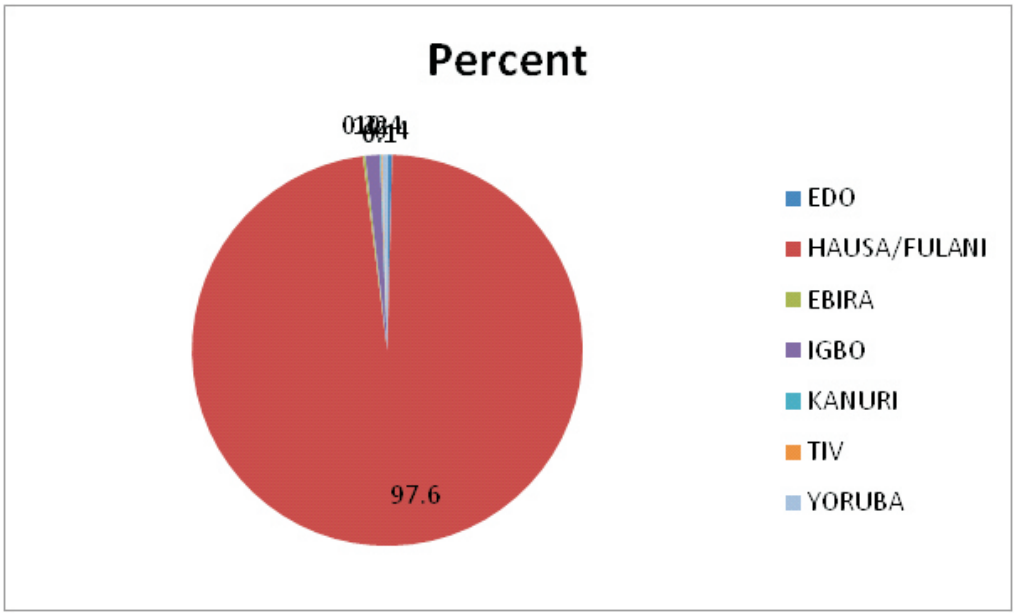
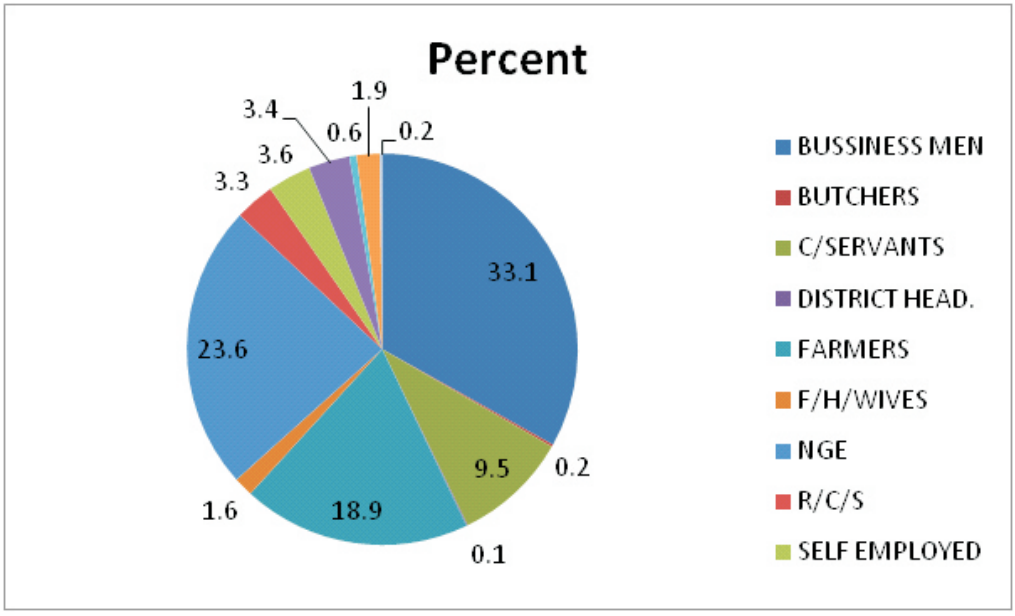


FIGURE 2: Tribes of the Inpatients With BOO Managed At AIUC Between January 2012 And December 2014



C/servants = Civil Servants; F/H/Wives = Full Time Housewives; NGE=non Gainfully Employed; R/C/S = Retired Civil Servants
Figure 3: Occupations Among the Inpatients With Boo Managed at AIUC Between January 2012 And December 2014

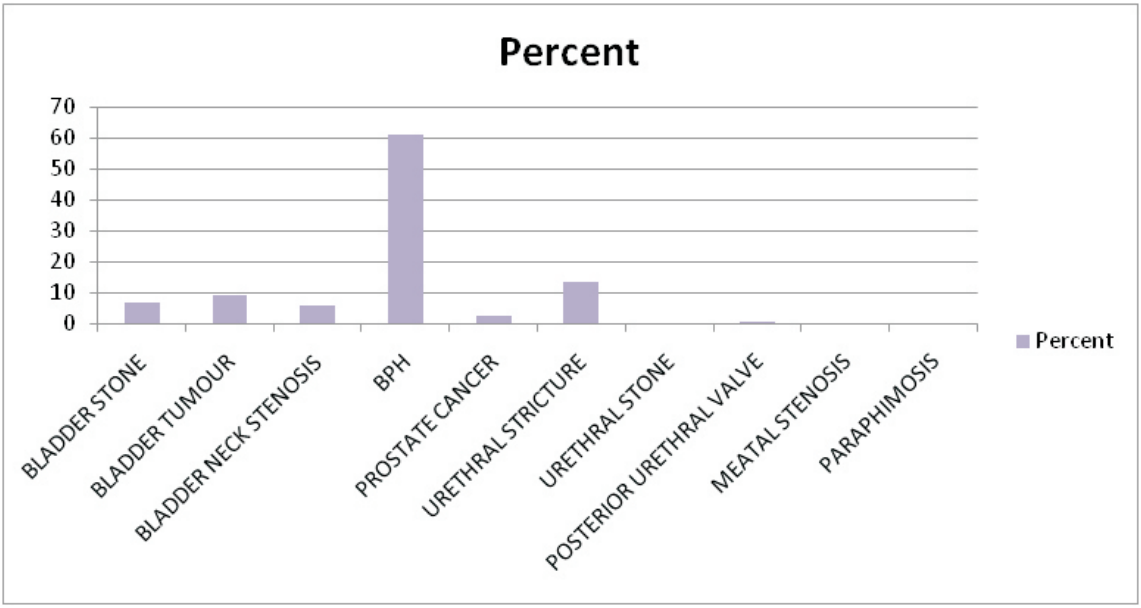


Figure 4: Diagnosis among the inpatients with BOO managed at AIUC between January 2012 and December 2014

Table 1: Complicated BPH Among The Inpatients With Boo Managed at AIUC Between January 2012 And December 2014

COMPLICATIONS	Frequency	Percent
BPH + BLADDER DIVERTICULUM	1	5.56
BPH + BLADDERSTONE	16	88.89
BPH + LEFT INGUINAL HERNIA	1	5.56
Total	18	100.0

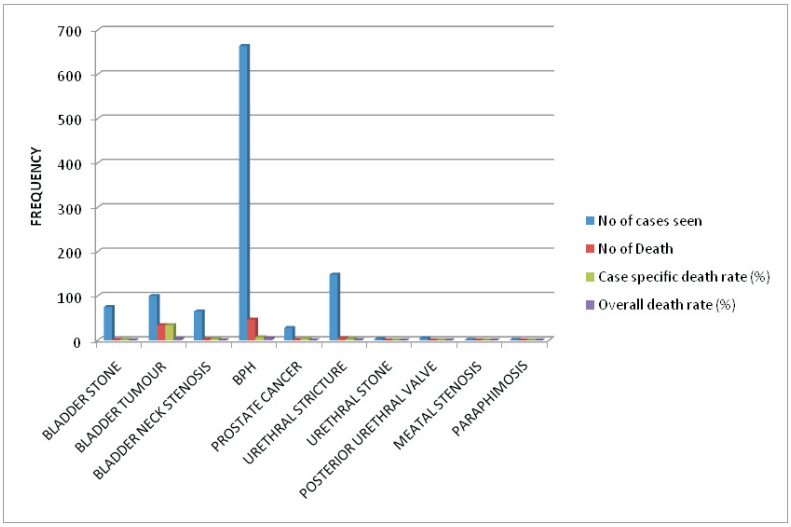


Figure 5: Cases with Number of Deads, Case Specific Dead Rate and Overall Dead Rate Among the Inpatients with BOO Managed At Aiuc Between January 2012 And December 2014

DISCUSSION

This appraisal apportioned aetiologies of the managed BOO among inpatients of the Urology Center in Northern Nigeria, the analysis could serve as a substructure for urologic capacity building and upgrading of care. More than 95% of the studied population was Hausas or Fulanis, hence have comparably common cultural creeds. Over a third of the patients were businessmen, Kano city being a center of commerce in the northern Nigeria[8]. Not gainfully employed subject's population was high as typically witnessed in the suburban and urban areas in most parts of the Nigeria[9]. BOO accounted for 72.47% of the entire in patients care during the 3-year review. BPH was the foremost among the causes of BOO in the study and is the most common benign neoplasm seen in the adult males. Therefore, BOO is predominantly a disease of Males[2]; additionally, males often attend hospital more than females in our part of the world[10]. For these reasons in this study, 98% of patients were males. The mean age of 58.4+_19.1 was consistent with the known age bracket of patients with Prostatic diseases, urethral strictures and other dominating causes of BOO[11]. BPH was 60.9% among these patients and all had open prostatectomy in the form of transvesical or the retropubic prostatectomy. Open prostatectomy is still the practice in most of the developing Nigerian communities. The procedure as expected follows patient's optimization especially inpatient's with urosepsis and impaired renal function. Among the patients that had the prostatectomy for BPH,18(2.7%) had an additional surgical treatment of complications related to BOO (Table:1)usually resulting from delay in presentation, late in presentation is across the board in our populace[12].

The urethral stricture was 13.8%; complicated by bladder stone in a patient and Fournier's gangrene in another patient at their presentation, these were the hallmark of delayed presentations. Post-infective strictures are on the decline with the standard antibiotic treatment of urethritis, however, the complementary raise in posttraumatic urethral injuries maintained the prevalence[13]. Bladder cancers mostly advanced at presentation were 9.2% among the studied causes of BOO although 6.5% of all cancers in a study in Kano[14]. The noticeable prevalence of bladder cancer and bladder neck stenosis in the studies could due to urinary schistosomiasis endemicity in populace[15.16,17]. Bladder stones in this review were more than the prior five-year review from a sister tertiary hospital in Kano[18]; due prompt patient's turnover in the centre. Urinary stasis with resultant chronic UTI from BOO are established risk factor for bladder calculi due to urea-splitting organisms such as Proteus mirabilis[19]. Studies have shown that prostate cancer is the most common malignancy among adult males in our set up and patients often presents with an advanced disease[20.21]; the palliative care was usually given on outpatient, in addition, a number presents with no BOO hence only 2.6% BOO inpatient.

The predominating complications of urosepsis and uraemia are from BPH and bladder cancer. Case specific death rate was highest for bladder cancer from an added tumor progression as shown in fig 6 - all the results of delayed presentation. Therefore, increased societal awareness on dangers of delaying presentations and untreated childhood haematuria from schistosomiasis will scale down the average 9.9 (±6.2) days duration of hospital stay and 8.3% Mortality recorded. This average duration of hospital stay and by extension morbidity plus the mortality rate was higher than those from the centers that use minimal access interventions[22]. Consequently, advocating TURP for BPH treatment becomes necessary for greater pleasant outcome, a shorter admission stay, less treatment spending and confirmed patient's satisfaction[23].

This review has weaknesses common to retrospective hospital-based studies. The follow-up and treatment outcome details were not exhaustive .Properly planned prospective appraisal on detailed epidemiologic, diagnostic, intervention outcome is expected to concede the commonality and distinctiveness within BOO inpatients in Kano. Stakeholder's support is significant for the outspread study.

CONCLUSION

This appraisal acknowledged management of BPH as the topmost indication for BOO inpatient care; and its complications plus bladder cancer progression as the most common causes of mortality. The study highlighted the need for revamping health care planning and a boost in the triad of manpower development, procurement of the needed equipment and the provision of essential capital to meet the gold standard urological care in the center. The focus should be on the quartets of the greater pleasant outcome, a shorter admission stay, less treatment spending plus patient's satisfaction. Enhanced health education will help reduced risk of bladder cancer and the late complicated patient's presentations.

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