

Country Data

Pattern of Renal Diseases among Children in The Niger Delta Region, Nigeria

G I McGill Ugwu, G Nwajei and U Chinemelu

Department of Pediatrics, University Teaching Hospital, Oghara, Delta State, Nigeria

Abstract

Introduction: Childhood renal diseases are increasing in Nigeria. It is necessary to monitor the nature of these diseases in each locality for effective health care planning. Our aim was to document the nature of renal diseases in the Niger Delta Region of Nigeria and compare it with other regions in the country.

Methods: We reviewed the documents of all children presenting with renal diseases between January 2010 and December 2012 to the Delta State University Teaching Hospital in Oghara and GN Children's Clinic in Warri, the two major pediatric nephrology service providers in the Niger Delta region of Nigeria.

Results: A total of 110 patients were studied, comprising 73 males and 37 females. About half the patients were aged 5-10 years. Renal diseases accounted for 1.6% of all admissions during the same period. The commonest presentations were nephrotic syndrome (30%), acute glomerulonephritis (18.2%), urinary tract infection (16.3%), acute kidney injury (10.9%), chronic kidney diseases (7.3%) and obstructive uropathy (7.3%). Regarding the outcome of renal diseases, 80% of the patients achieved full recovery, 14.6% died and 5.4% were discharged against medical advice or lost to follow up. The highest mortality rate was among patients with chronic kidney disease (75%), followed by acute kidney injury (41.7%).

Conclusion: A renal registry based on unified definitions of renal diseases is required for the proper planning of health care strategies. Mortality rate of chronic kidney disease was high in this study mostly due to late presentation.

Keywords: Renal Diseases Children; Niger Delta; Nigeria.

The authors declared no conflict of interest

Introduction

Reports from Nigeria showed an increase in the incidence of renal diseases in both adults and children [1]. In resource limited countries, compiling data about the nature of renal diseases is difficult. This may be attributed to poor record systems and in some instances to low zeal to carry out such research. Yet, it is very important to have local renal registry data to optimize health care planning. For instance, while congenital anomalies of the kidney and the urinary tract (CAKUT) and hereditary nephropathies are responsible for two thirds of chronic kidney disease (CKD) cases in developed countries, acquired cases predominate in developing countries [2]. Estimates from the Delta State University Teaching Hospital in our region indicate that CKD is the fourth commonest cause of admissions in the pediatric wards [3]. As in other developing countries, most patients present in the late stages of the disease [4]. We present here a description of the pattern of renal diseases among children in the Niger Delta region of Nigeria, between January 2010 to December 2012.

Methods

We reviewed the documents of all children presenting with renal diseases to the two major pediatric nephrology service providers in the Niger Delta region of Nigeria between January 2010 and December 2012. During this period, 90 patients were seen at the Delta State University Teaching Hospital in Oghara and 20 children were seen at GN Children's Clinic in Wari.

*Corresponding author; Department of Paediatrics, University Teaching Hospital, PMB 07 Oghara, Delta State, Nigeria; E-mail: gnclinic1@yahoo.co.uk

Results

The records of 110 children with renal diseases were analyzed, comprising 73 males and 37 females. Most of patients were aged 5-10 years (53.6%), while 24.5% were adolescents, 16.4% were pre-school children and 5.5% were neonates.

Renal diseases accounted for 1.6% of all admissions during the study period. Nephrotic syndrome was the commonest presentation, accounting for 30% of cases and over 55% of nephrotic syndrome cases were steroid resistant. Other presentations included acute glomerulonephritis (18.2%), urinary tract infection (16.3%), acute kidney injury (10.9%), CKD (7.3%) and obstructive uropathy (7.3%). The remaining 10% of cases were accounted for by hemolytic uremic syndrome, unilateral renal agenesis, polycystic kidney disease, renal ectopia, renal calculi, Wilm's tumor, clear cell renal carcinoma and renal Burkitt lymphoma.

Regarding the outcome of renal diseases, 80% of the patients achieved full recovery, 14.6% died, 5.4% were discharged against medical advice or lost to follow up. The highest mortality was among patients with CKD (75%), followed by acute kidney injury (41.7%). Mortality among patients presenting with acute glomerulonephritis was only 0.01%.

Discussion

These data show that nephrotic syndrome is the commonest presentation of pediatric renal disease, accounting for 30% of cases. This is similar to reports from Ilorin in North Central Nigeria, Enugu in Eastern Nigeria and Ibadan in Western Nigeria [5-7]. Acute glomerulonephritis in general was reported as the commonest presentation of pediatric renal disease in many parts of Nigeria [8-10], although studies from Port Harcourt and Benin reported urinary tract infection as the commonest presentation [11, 12]. These variations in the same country and even in the same locality may be due to variations in sample collection methods and case definitions; however, there may be some racial undertone to these variations.

Discharge against medical advice and loss to follow up were not uncommon. This is a recognized phenomenon in developing countries, mostly triggered by poor financial circumstances of affected patients. In addition, many patients in resource-poor countries seek medical consultation only when they are overtly ill. This is reflected on the high mortality rate in patients with CKD.

Conclusion

A renal registry based on unified definitions of renal diseases is required for the proper planning of health care strategies. Mortality rate was high in this study mostly due to late presentation.

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