

Referral to the nephrology outpatient clinic: Inadequate demand for the specialist

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ABSTRACT

Introduction: There are scarce data in Brazil concerning the referral of the patients with renal diseases to the nephrologist care. **Objective:** The aim of the present study was to describe the adequacy of early referral of these patients to a nephrology out-patient clinic. **Material and methods:** It was a cross-sectional study. Data of the first visit of the patient to the nephrologists were collected. The decision of the nephrologist, regarding the admittance of the patient to the follow-up with the nephrology team was also described. **Results:** We evaluated 150 patients, with mean age of 49 ± 16 years, and 56% of females. The need of a consultation and follow-up with the renal specialist was found in only 71 patients (47.3%) and all these patients were enrolled in the nephrology unit out-patient clinic for, at least, one visit a year. All the patients with chronic kidney disease stages 3 to 5 were recommended to maintaining visits to the nephrologist, whereas 60% of those with diabetes and/or hypertension and 50% of those with renal lithiasis were also enrolled in the same program. Approximately 50% of patients originated from public health system units and 70% of private doctors were adequately referred. **Conclusion:** There was inadequate use of the abilities of the nephrologist as a specialist in the care of the patient with early stages of renal diseases. Other studies are needed to evaluate the efficiency of referral systems to the nephrologists in other areas of Brazil, with the purpose to rationalize supply and demand in the nephrology care.

Keywords: referral and consultation; nephrology.

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INTRODUCTION

There have been several reports, both in Brazil and other countries, about the late referral of patients with nephropathies to the nephrologist, resulting in greater morbidity and mortality of those patients.^{1,2,3,4} Several patients received for dialysis programs had little, if any, previous contact with the specialist before starting dialysis.^{4,5} In the State of Bahia, Godinho *et al.* have reported that 71% of the patients with end-stage renal disease (ESRD) admitted to the nephrology referral hospital had had no previous contact with the nephrologist, and half of them used the emergency room as the primary place for medical care. Many of those patients presented with a dialysis emergency. Studies on the referral of patients to the nephrologist at earlier stages of nephropathy, especially in our country, are rare. This study aimed at investigating the adequacy of referring patients to the nephrology outpatient clinic in terms of the relevance of demand for assessment by a specialist.

METHODS AND CASE SERIES

This was a cross-sectional study conducted at the Hospital Ana Néri (HAN), of the Universidade Federal da Bahia, a center for delivering highly complex services of the Brazilian health system – Sistema Único de Saúde (SUS). In the months of February and March 2008, all patients arriving at the outpatient clinic of the HAN for an initial visit with the nephrologist were referred to a first-visit outpatient clinic, to be seen by a certified nephrologist and, at a contiguous room, by four second-year nephrology residents. After the usual medical consultation, the patients

were asked to fill in a questionnaire so that their data could be used in this study. At the end of each visit, the researcher-physician wrote down the demographic data, the name of the patient's center of origin, the brief nephrologist's opinion, and the patient's management regarding admission to the nephrology outpatient clinic.

Four possible management groups had been previously defined as follows: A) Registration at the nephrology outpatient clinic for early return (< 1 year) and followup. This group comprised patients with chronic kidney disease (CKD) stages 3, 4, and 5 and/or signs of glomerulopathy, tubulopathy, and acute renal failure; B) Registration at the nephrology outpatient clinic for annual visit. This group comprised patients with chronic nephropathies at earlier and more stable stages; C) Patient's referral to the primary health care unit, to the service originating the consultation, or to another specialist, despite the presence of uro-nephrological or metabolic affections, because there was no need for the nephrologist's opinion and management. For example, patients with urinary tract infection, simple renal cyst, noncomplicated systemic arterial hypertension, diabetes mellitus (DM) without nephropathy, a single episode of presumed renal colic, hydronephrosis without renal function loss etc.; D) Patients, in whom no affections of the kidneys and urinary tract could be identified, were instructed to look for a primary health care unit for consultation.

In Table 1, groups A and B were described together as patients who required at least one annual assessment with the specialist, while groups C and D were shown separately as patients without such need. The suggested managements followed the clinical

interpretation of the research team, decided by at least two of the researchers, including the certified nephrologist.

Data were described as mean, standard deviation, and relative frequencies.

RESULTS

In the first 150 consultations here described, the mean age of the patients was 49 ± 16 years, the female sex predominated (56%), and 38% of the individuals were blacks, 16% white, and 45% of mixed origin. In 11% of the cases, the patients declared themselves illiterate, 34% had not completed elementary education, 33% had completed elementary education, and 17% had completed middle school. Most patients (63%) came from capital, the city of Salvador. Table 1 shows the nephrologist's management at the first medical visit.

According to the interpretation of the researchers, 79 patients (52.7%) did not require a nephrologist for the diagnosis, clinical management or follow-up. Affections of the urinary tract were not found in 31 patients; and 48 patients, who had been referred by public health or private services, required no specialist. Of all patients examined, 71 (47.3%) were admitted to the nephrology outpatient clinic for at least one annual assessment.

Urinary lithiasis, as an isolated diagnosis, was the commonest reason for referral to the nephrology outpatient clinic, followed by CKD stages 3 to 5, and diabetes and/or hypertension. All patients with CKD stages 3 to 5 were registered at the nephrology outpatient clinic. Approximately 60% of the diabetic and/or hypertensive patients and 50% of those with lithiasis were also registered.

Table 1

MANAGEMENT OF PATIENTS AFTER THE FIRST CONSULTATION WITH THE NEPHROLOGIST ACCORDING TO THE DIAGNOSIS

Diagnosis	n	Minimum annual assessment with the nephrologist	Return to the PHCU or other specialist	PHCU due to lack of urinary tract affection
CKD	24	24		
DM and/or SAH	22	13	9	
Hydronephrosis	11	2	9	
Renal lithiasis	31	15	16	
Others	62	17	11	31
Total	150	71 (43.7%)	48 (32%)	31 (20.6%)

CKD: chronic kidney disease stages 3 to 5; DM: diabetes mellitus; SAH: systemic arterial hypertension; PHCU: primary health care unit.

The requests for consultation with the nephrologist originated from primary health care units (n = 40) in 27% of the cases, and from other different units of SUS in 36% of the cases (n = 56). Eighteen percent of the cases (n = 28) came spontaneously for consultation without a medical referral, and 10% (n = 17) were referred by private doctors. In nine cases, the origin of the consultation request could not be identified. Approximately 50% of the patients with consultation requests originating from primary health care units (18/40) or from other specialists of the SUS network (31/56) were registered at the nephrology outpatient clinic. Of the patients referred by private doctors, 70% (12/17) were registered at the nephrology outpatient clinic, while only one of the patients who came voluntarily was registered at that outpatient clinic.

DISCUSSION

It is estimated that there are more than 2,000 patients with CKD stages 2 to for each nephrologist in the United States.⁷ According to the Brazilian Society of Nephrology, in the year 2008, there were 2,733 registered nephrologists. Only 133 of those (5%) were registered in the State of Bahia, where this study was carried out. That information may not reflect the actual number of nephrologists in activity in the country or in that particular region. In developed countries, where statistics are more accurate, there is the perception that there are few specialists to respond to the needs of the increasing prevalence of CKD in different stages.

At the HAN hemodialysis unit where patients with CKD were assisted in in July 2008, one semester after its reopening due to remodeling, only 40% of the patients were dialyzed through permanent access, and 100% of the incident patients (new cases) arrived with temporary venous catheter, an indication of late referral to the nephrologist. At another hospital in the city of Salvador,⁴ of the 122 patients admitted for chronic dialysis, only one received initial treatment through arteriovenous fistula.

The present study reveals a paradox: the inadequate use of the qualification of the nephrologist as a specialist in the early management of patients with renal diseases, as compared with the late referral of end-stage renal disease patients to the specialist. There is no consensus among specialists about when the patient correctly identified as having renal disease should be referred to the nephrologist for assessment.^{5,8} In another study, the interpretation of the adequacy of the referral was not based on scientifically tested criteria,

but on the opinion of the authors. The presence of nephropathy and the possibility of the positive influence of the nephrologist on the prognosis of the renal disease guided the indication of registration at the nephrology outpatient clinic. The subjectivity of those criteria hinders the precise assessment of the results found.

This study did not aim at identifying the causes of the paradox here presented. We speculate if the lack of information of other specialists about nephropathies and clinical practice of the nephrologist could justify the results found. Among North-American general physicians⁸ with different backgrounds, 63.8% correctly identified patients with CKD stage 2 in the presence of proteinuria. However, in the absence of proteinuria, and with serum creatinine values within the normal reference range (up to 1.3 mg/dL), less than 50% of the physicians identified the stage 3 of CKD. In the presence of diabetic nephropathy, 82.3% of those physicians prescribed angiotensin-converting enzyme inhibitors (ACEI) and 13.4% prescribed AT1 receptor antagonists (ARA). However, in the presence of proteinuria attributed to a cause other than DM, only 60.5% of the physicians prescribed ACEI, and 14.9%, ARA.

The elevated number of spontaneous search for health care hinders the best adjustment between supply and demand, and, after the first results of this study, scheduling of first medical consultations for patients with no medical report was suspended. Nevertheless, we considered the percentage (\pm 50%) of patients inadequately referred by SUS physicians high. We understand that patients who did not need consultation with a nephrologist got one, while patients with CKD (identified or not as having renal disease) of the SUS network had difficulty in accessing that specialist.

We think that we have to check if those results reflect only a local phenomenon or also reflect the reality of other services. There is an enormous ongoing effort at the SBN to promote the prevention of CKD and its complications. Such actions of the SBN can result in increased demand of correctly referred patients to the nephrologist in coming years. Other studies are required to assess the efficacy of ongoing referral and contra-referral models in the country, aiming at rationalizing the supply and demand of medical care in nephrology.

REFERENCES:

1. Kinchen KS, Sadler J, Fink N *et al*. The timing of specialist evaluation in chronic kidney disease and mortality. *Ann Intern Med* 2002; 137(6):479-86.

2. Lhotta K, Zoehl M, Mayer G, Kronenberg F. Late referral defined by renal function: associations with morbidity and mortality. *J Nephrol* 2003; 16(6):855-61.
3. Abdulkader RC, Zanetta DM, Oliveira GM, Burdman EA. Risk factors for hospital death of patients with end-stage renal disease without previous diagnosis of severe chronic renal failure arriving in an emergency situation at the hospital. *Ren Fail* 2003; 25(4):631-8.
4. Godinho TM, Lyra TG, De Queiroz RA *et al.* Perfil do paciente que inicia hemodiálise de manutenção em hospital público em Salvador, Bahia. *J Bras Nefrol* 2006; 28:96-103.
5. Bhandari S, Cheung CK. Perspectives on eGFR reporting from the interface between primary and second care. *Clin J Am Soc Nephrol* 2009; 4(2):258-60.
6. Romão Jr JE. Doença renal crônica: definição, epidemiologia e classificação. *J Bras Nefrol* 2004; 26 (1): 1-3.
7. Blantz RC. Handing out grades for care in chronic kidney disease: nephrologists versus non-nephrologists. *Clin J Am Soc Nephrol* 2007; 2(2):193-5.
8. Mccellan WM, Ramirez SPB, Jurkovitz C. Screening for chronic kidney disease: unresolved issues. *J Am Soc Nephrol* 2003; 14(7 Suppl 2):S81-7.
9. Israni RK, Shea JA, Joffe MM, Feldman HI. Physician characteristics and knowledge of CKD management. *Am J Kidney Dis* 2009; 54(2):238-47.