

Upper Digestive Endoscopic Lesions in Chronic Kidney Disease (CKD): Experience of a Senegalese Center; About 50 Cases

Cisse Mouhamadou Moustapha^{1*}, Ka El Hadji Fary¹, Dia Daouda², Mahamat AG¹, Jean De Dieu Nzambaza¹, Lemrabott Ahmed Tall¹, Fall Seynabou³, Faye Maria¹, Fall Khodia¹, Bassene Marie Louise⁴, Niang Abdou¹ and Diouf Boucar¹

¹Department of Nephrology, Cheikh Anta Diop University Teaching Hospital, Aristide Le Dantec, Dakar Senegal

²Department of Gastroenterology, Cheikh Anta Diop University Teaching Hospital, Yoff, Senegal

³Department of Internal Medicine, Cheikh Anta Diop University Teaching Hospital, Aristide Le Dantec, Dakar, Senegal

⁴Department of Gastroenterology, Cheikh Anta Diop University Teaching Hospital, Aristide le Dantec de Dakar Senegal

Abstract

Objectives: This study was conducted to evaluate upper digestive endoscopic lesions among patients with chronic kidney disease.

Methodology: We conducted a retrospective cross-sectional study in Nephrology and Gastroenterology services at Hospital Center University Aristide Le Dantec from January 2008 to December 2009. All patients with chronic kidney disease who underwent an upper gastrointestinal endoscopy were included.

Results: Fifty patients were included, with a mean age of 44.2 years and a sex ratio (male/female) of 1.27. Upper digestive endoscopy was abnormal in 76%. Peptic esophagitis was noted in 7 patients, hiatal hernia in 10 and cardiac incontinence in 2. Congestive gastritis was observed in 6 cases, followed by erosive and hemorrhagic gastritis in 5 cases each one and a gastric ulcer in 2. Six patients presented a bulbitis, which was erosive in 3, congestive in 2 and 1 of the large folds. Bulbar ulcer was noted in 3 patients and post bulbar ulcer was also noted in 3 patients. One patient presented a congestive duodenitis.

Conclusion: Upper digestive endoscopy lesions are frequent and diverse among patients with chronic kidney disease. These findings justify the systematization of upper digestive endoscopy in digestive complaining uremic patients.

Keywords: Chronic kidney disease, Hemodialysis, Upper gastrointestinal endoscopy

Introduction

Gastrointestinal symptoms revealing or complicating chronic kidney disease (CKD) are very numerous [1]. Different gastroesophageal and gastroduodenal endoscopic lesions are described in CKD with a predominance of gastritis [2]. Our objective was to report the anomalies found at upper gastrointestinal endoscopy (UGE) in patients with CKD in nephrology unit in Dakar.

Patients and Methods

This was a retrospective cross-sectional study, conducted in the Nephrology unit of the Aristide Le Dantec Hospital in Dakar from January 2008 to December 2009. The records of CKD patients hospitalized who underwent UGE were collected. In these cases, we collected age, sex, history, the stage of CKD, digestive symptoms that led UGE and lesions found. Incomplete records were excluded. The estimated creatinine clearance was calculated using the Cockcroft and Gault. CKD was defined as a creatinine clearance below 60 ml / min/1.73 m² for at least three months and the classification used was that proposed by K-DIGO [3]. The data were entered and analyzed using SPSS 13.0 software. The difference was considered significant if p value was < 0.05.

Results

We collected 65 cases, 15 were excluded and analyses focused on the remaining 50 cases. The average age of patients was 44 years (range from 17 to 81 years); there were 28 men and 22 women (sex ratio, 1.27). The mean creatinine clearance was 8.54 ml/min (range 2.61 and 34.60 ml/min). Forty-five patients were CKD stage 5, three were CKD stage 4 and 2 were CKD stage 3. Thirteen patients (26%) were receiving renal replacement therapy with 10 using hemodialysis and 3 peritoneal dialysis. Gastrotoxic medication with aspirin and/or

nonsteroidal anti-inflammatory drugs was found in 27 patients (54%), active smoking in 10 patients weaned and regular alcohol consumption in 2 patients. The causes of CKD were diabetic nephropathy (5 cases), hypertensive nephropathy (21 cases), primitive glomerulonephritis (9 cases), chronic tubulointerstitial nephropathy (9 cases), sickle cell nephropathy (1 case), autosomal dominant polycystic kidney disease (1 case) and undetermined nephropathy (4 cases).

The symptoms that led UGE are shown in Table 1.

UGE revealed lesions in 38 cases (76%) and these are shown in Table 2.

In analytical studying, endoscopic lesions were not correlated with the stages of CKD or the existence or not of renal replacement therapy.

Discussion

This study highlights the high prevalence of upper gastrointestinal endoscopic lesions in patients with CKD (76%). A prevalence of 72.9% was found by Serme et al. in Burkina Faso [4] and in Italy it was 74% according to Nardone et al. [5] Upper gastrointestinal lesions in our series had a predominant localization in gastric and duodenal level. The

***Corresponding author:** Cisse Mouhamadou Moustapha, Hospital Center University Aristide Le Dantec, 30 avenues, Pasteur Dakar, Sénégal, BP 3001, Tel: +00 221 77 573 88 09, E-mail: mhmcisse@yahoo.fr

Received: November 21, 2014; **Accepted:** May 14, 2015; **Published:** May 21, 2015

Citation: Cisse MM, Fary KEH, Daouda D, Mahamat AG, Nzambaza JDD, et al. (2015) Upper Digestive Endoscopic Lesions in Chronic Kidney Disease (CKD): Experience of a Senegalese Center; About 50 Cases. J Nephrol Ther 5: 202. doi:10.4172/2161-0959.1000202

Copyright: © 2015 Cisse MM, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Indications	Number of patients	Percentage (%)
Vomiting	42	84
Anorexia	32	64
Nausea	24	48
Epigastric pain	23	46
Regurgitation	20	40
Dyspepsia	16	32
Heartburn	11	22
Dysphagia	6	12
Hematemesis	6	12

Table 1: Indications of UGE.

	Lesions	Number of patient	Percentage (%)
Esophagus	Peptic oesophagitis	8	16
	Sliding hiatal hernia	10	20
	Schatzki ring	1	2
Stomach	Gastritis	17	34
	Gastric ulcer	2	4
	Angiodysplasia	1	2
Duodenum	Bulbitis	7	14
	Ulcer	3	6

Table 2: Lesions on UGE.

most common gastric lesions in our patients were gastritis. In Burkina Faso, gastric lesions were at the forefront followed with 68.7% of cases by duodenal lesions with 32.2% of cases [4]. Several factors, including alcohol, sepsis, hypergastrinemia and gastrototoxic drugs have been implicated in the development of gastritis [5]. The degree of chronic kidney disease was not correlated with the occurrence of gastric lesions. However, the influence of the degree of CKD on the occurrence of gastritis is variously appreciated. Stolic did not find influence while Mitchell found gastritis in all patients with severe stages of CKD [6,7]. Gastritis often noted in uremic patients, has often been reported to cause bleeding [8,9]. As in our series, the prevalence of angiodysplasia is relatively rare [5]. By Goldstein against reported a high frequency of angiodysplasia lesions in severe uremia [10]. Angiodysplastic lesions are the leading cause of gastrointestinal bleeding in patients with CKD according Zukerman [11]. Duodenitis was rare in our series. This corroborates the results of Al Mueilo in Saudi Arabia who found only 3 duodenitis (5.2%) in 54 hemodialysis patients [12]. In duodenum, ulcer was equally divided between the duodenal bulb and the other portions. This distribution is different from classical literature data, which show a predilection site of ulcer on the post bulbar area. These ulcers are often multiple [13]. Work performed at the Hospital Al-Khobar Saudi

Arabia found a hiatal hernia in 2.5% of patients with end-stage CKD [13]. The reflux esophagitis accounted for 18% of endoscopic lesions. Its prevalence is 26.2% in CKD [14].

Conclusion

Upper gastrointestinal lesions often overlooked in this field can lead to major complications, the most feared is bleeding. This work shows the need for an upper endoscopy in patients with digestive uremic signs.

Reference

- Kang JY (1993) The gastrointestinal tract in uremia. *Dig Dis Sci* 38: 257-268.
- Verma PP, Pruthi HS, Thakur SK, Prasher PK, Singh B, et al. (1999) upper gastrointestinal mucosa in chronic renal failure: an endoscopic and histological evaluation. *Med J Armed Forces India* 55: 307-309.
- Levey AS, Eckardt KU, Tsukamoto Y, Levin A, Coresh J et al. Definition and classification of kidney disease: a position statement from kidney disease: improving global outcomes (KDIGO). *Kidney Int* 67: 2089-2100.
- Serme AK, Lengani A, Iboudo PD, Sawadogo N, Sombie R (2003) Les lésions endoscopiques digestives hautes dans l'insuffisance rénale chronique sévère en Afrique. *Med Afr Noire* 50: 31-36.
- Nardone G, Rocco A, Fiorillo M, Del Pezzo M, Autiero G, et al. (2005) Gastroduodenal lesions and Helicobacter Pylori infection in dyspeptic patients with and without chronic renal failure. *Helicobacter* 10: 53-58.
- Mitchell CJ, Jewell DP, Lewin MR, McLaughlin JE, Moorhead JF (1979) *J Clin Pathol* 32: 208-213.
- Stolic RV, Jovanovic AN, Zivic ZP, Peric VM, Markovic SR, et al. (2008) Influence of the level of renal insufficiency on endoscopic changes in the upper gastrointestinal tract. *Am J Med Sci* 1: 39-43.
- Khedmat H, Ahmadzad-Asl M, Amini M, Lessan-Pezeshki M, Einollahi B, et al. (2007) Gastroduodenal lesions and helicobacter pylori infection in uremic patients and renal transplant recipients. *Transplant Proc* 39: 1003-1007.
- Tsai CJ, Hwang JC (1996) Investigation of upper gastrointestinal hemorrhage in chronic renal failure. *J Clin Gastroenterol* 22: 2-5.
- Goldstein H, Murphey D, SokolA, Rubini ME (1967) Gastric acid secretion in patients undergoing chronic dialysis. *Arch Intern Med* 120: 645-653.
- Zukerman GL, Cornette GL, Clouse RE, Harter HR (1985) upper gastrointestinal bleeding in patients with chronic renal failure. *Ann Intern Med* 102: 588-592.
- Al Mueilo SH (2004) Gastroduodenal lesions and helicobacter pylori infection in hemodialysis patients. *Saudi Med Journ* 25: 1010-1014.
- Fallone CA, Mayrand S (2001) Gastroesophageal reflux and hyperacidity in chronic renal failure. *Perit Dial Int* 21: S295-299.
- Cekin AH, Boyacioglu S, Gursoy M, Bilezikci B, Gur G, et al. (2002) Gastroesophageal reflux disease in chronic renal failure patients with upper gastrointestinal symptoms: multivariate analysis of pathogenesis factors. *Am J Gastroenterol* 97: 1352-1356.