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Upper Gastrointestinal Lesions in Patients with Chronic Kidney Diseases What Particularity?

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ABSTRACT

Background: Chronic kidney disease (CKD) is a widespread and advancing condition that disrupts renal function, yet its influence extends beyond the kidneys. In this article, we investigate the complex interplay between CKD and the gastrointestinal tract (GIT), highlighting the often overlooked and diverse digestive disorders that affect CKD patients. ***Materials and Methods:*** We conducted a study involving 506 CKD patients admitted who underwent esophagogastroduodenoscopy (EGD) between January 2008 and January 2024.***Results:***506 patients with CKD out of 18,819 EGD procedures were included in our study, representing a prevalence of 2.68%. The mean age was 48.7 years. With a male predominance. EGD was performed for upper gastrointestinal bleeding in 156 cases (30.8%), dyspepsia in 134 cases (26.4%), epigastralgia in 98 cases (19.4%), vomiting in 65 cases (13%), and as part of the investigation for iron-deficiency anemia in 53 cases (10.4%), Lesions were found in 433 cases (85.6%). These included congestive gastro-bulbitis in 218 cases (43%), ulcerative gastro-bulbitis in 74 cases (14.6%), angiodysplasia in 56 cases (11%), esophagitis in 37 cases (7.3%), gastroduodenal ulcer in 36 cases (7.1%), signs of portal hypertension in 25 cases (4.9%), and hiatal hernia in 21 cases (4.1%). ***Conclusion***: Upper gastrointestinal lesions are common in chronic renal failure. Our study showed that they are dominated by congestive and ulcerative gastro-bulbitis.

Introduction

Chronic kidney disease (CKD) is often associated with gastrointestinal involvement, the clinical manifestations of which vary. These abnormalities are classically described as becoming more frequent as renal insufficiency progresses. The aim of our work is to describe the endoscopic aspects of upper digestive tract lesions in this patient population.

Materials and Methods:

This is a descriptive monocentric study conducted in a functional digestive endoscopy unit, including all patients with CKD, whether undergoing hemodialysis or not, who underwent esophagogastroduodenoscopy (EGD) between January 2008 and January 2024. Data were collected from endoscopy registries.

Results:

506 patients with CKD out of 18,819 EGD (esophagogastroduodenoscopy) procedures were included in our study, representing a prevalence of 2.68%.

The mean age was 48.7 years (range: 13 to 90 years). With a male predominance (sex ratio = 1.55) .EGD was performed for upper gastrointestinal bleeding in 156 cases (30.8%), dyspepsia in 134 cases (26.4%), epigastralgia in 98 cases (19.4%), vomiting in 65 cases (13%), and as part of the investigation for iron-deficiency anemia in 53 cases (10.4%) (Figure 1).

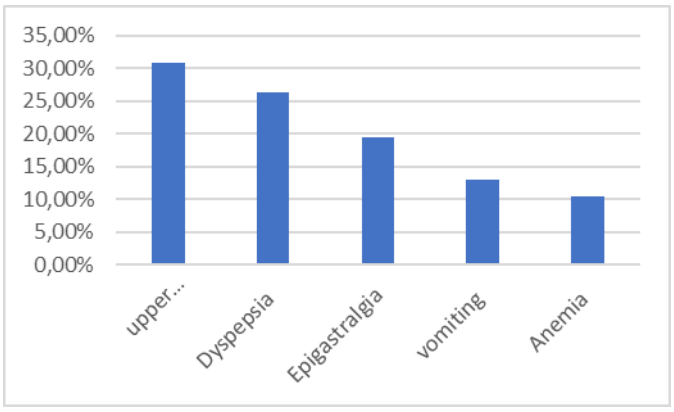

Figure 1. Clinical presentation

Lesions were found in 433 cases (85.6%). These included congestive gastro-bulbitis in 218 cases (43%), ulcerative gastro-bulbitis in 74 cases (14.6%), angiodysplasia in 56 cases (11%), esophagitis in 37 cases (7.3%), gastroduodenal ulcer in 36 cases (7.1%), signs of portal hypertension in 25 cases (4.9%), and hiatal hernia in 21 cases (4.1%) (Figure 2).

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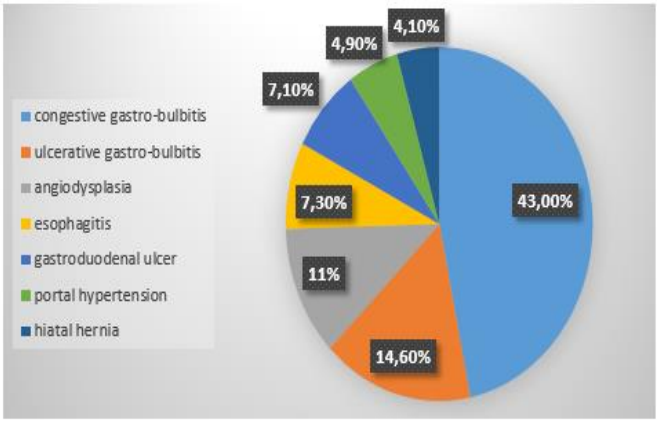

Figure 2.Endoscopic results

Discussion:

Chronic kidney disease (CKD) and end-stage renal disease (ESRD) cause many organ complications including gastrointestinal tract [1], many of the symptoms observed in uremic patients can be attributed to the underlying pathological processes. Previous studies have extensively explored the pathophysiology of these symptoms and the endoscopic findings in CKD-uremic patients. [2]

Gastrointestinal complications in hemodialysis patients with CKD and end-stage renal disease (ESRD) have multifactorial causes, most of which improve after the start of dialysis [3].

In our study, patients' ages spanned from 13 to 90 years, with the majority falling within the 30 to 60-year-old age group. In a similar study conducted by Varma et al1. The age of the patients ranged from 17 to 70 years. Different GI symptoms were noted in the patients under study. [4]

It was found that 89% of the patients had one or the other GI symptoms. This finding aligns with studies conducted by Farsakh et al. [5], where the prevalence of gastrointestinal (GI) symptoms was reported to be 70% in CKD patients, and by Cano [6], where 72% of CKD patients exhibited GI symptoms. Additionally, in a prospective study by Margolis et al. [7], it was observed that 59% of patients experienced symptoms, in our study, the most common complaints at presentation included vomiting, dyspepsia and hematemesis. Other previous studies have reported this phenomenon, which is associated with the progressive stage of CKD (stages IV and V) [8].

Antral gastritis, pangastritis and duodenitis were the most common endoscopic findings reported by Bansal *et al* [9]. Our study findings revealed that congestive gastro-bulbitis and ulcerative gastro-bulbitis were the predominant endoscopic findings upon presentation, with the majority showing improvement following treatment with proton pump inhibitors. These findings align with prior studies involving chronic kidney disease (CKD) patients experiencing dyspepsia or exhibiting other upper gastrointestinal symptoms like vomiting or epigastric pain [8-9].

Several studies therapy with proton pump inhibitors combined with antacids and antiemetic as well as hemodialysis is helping in controlling most of upper GIT symptoms and endoscopic lesions at the proximal GIT in patients with CKD-ESRD [8]

Conclusion:

CKD has a significant impact on the gastrointestinal tract, leading to a range of symptoms and potential complications, including often underreported upper gastrointestinal tract lesions. Early detection through upper GI endoscopy and prompt management are crucial for mitigating morbidity and mortality among CKD patients. Our study found that these lesions are predominantly characterized by congestive and ulcerative gastro-bulbitis, followed by angiodysplasia, which is consistent with other published studies

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