Duodenal biopsy-

parasites seen- partial villous atrophy, resembling coeliac disease (Figure 1)

erosions, intraepithelial lymphocytes- >50/100 enterocytes at places, no

normal with no significant atrophy/scalloping of duodenal folds. D2 biopsy-

negative for enteropathogens. Stool RE was normal with culture was

(0.94 mg/dl). Vitamine B12, folate and iron profile were normal. HBsAg,

dl), mild hypokalemia (K-3.2 meq/l), normal TSH, CRP, urea and creatinine

normochromic anaemia- (Hb-9.2 gm%, PCV-27.9, MCV-80.2; TLC- 8200/

The body mass index was 29 kg/m². Investigation revealed normocytic

On day 4, she had oliguria, tachycardia, tachypnoia and acidotic breathing

calprotectin was high-1589.00 mg/kg. CT enterography- was normal.

Colono-ileoscopy–normal and biopsy ruled out microscopic colitis. Faecal
calprotectin was high-1589.00 mg/kg. CT enterography- was normal.

An unusual case of small bowel diarrhoea

Jaya Ghosh Chatterjee, Asokananda Konar, Mala Bannerjee

We encountered a middle-aged female with severe diarrhoea leading to
dehydration and acute kidney injury. After failed trial of gluten free diet,
she responded only when olmesartan was stopped. AIM of reporting this
case is We as a clinician must be aware of this adverse effect of angiotensin
receptor II blocker and should have a high index of suspicion so that we can
avoid delay in the diagnosis as well as costly, frustrating unnecessary tests.

Key Words: Abdominal pain; Acute kidney; Colono-ileoscopy; Hypokalemia;
Endoscopy

Figure 1) Duodenal biopsy shows blunting and fusion of duodenal 2 nd part villi
with broadening of leaflets. Lamina propria is packed with lymphocytes, plasma
cells. Intraintestinal lymphocytes was >50/100 enterocytes. There are some
superficial erosions no parasites seen. Features resembling with partial villous
atrophy.

Serum AntitTgIGA for coeliac disease was negative (<1.4 u/ml) with normal
Total IGA level.

Colonoscopy-normal and biopsy ruled out microscopic colitis. Faecal
calprotectin was high-1589.00 mg/kg. CT enterography- was normal.

On day 4, she had oliguria, tachycardia, tachypnoia and acidotic breathing
but remained afebrile. ABG showed severe metabolic acidosis (Ph-7.0,
HCO3-2.0, pCO2-7). BP-100/70 mmHg. She was shifted to ITU, sepsis
screen was negative. Creatinine was raised to 3.0 mg/dl. FBS was 102 mg/
dl, urine showed no ketone bodies or pus cells. There was hypokalemia,
hypomagnesaemia (K-2.7, Mg- 1.40) and normal Na level-139 meq/l.

Differential diagnoses we thought at that time were contrast induced AKI,
sepsis with AKI, severe dehydration with AKI or any other causes of severe
diarrhoea. She was resuscitated with IV fluid and was given antibiotic. She
improved in 48 hours. She was off olmesartan since admission. Any view of
severe hypokalemia and diarrhoea-serum chromogranin A was checked-60.3
ng/ml, normal.

She was discharged after 12 days without any proton pump inhibitor and on
gluten free diet.

Duodenal biopsy.
She was readmitted after 7 days with severe diarrhoea, drowsiness, hypokalemia (2.7 meq/l), oliguria for 2 days and severe metabolic acidosis. (ABG - PH- 7.1, HCO₃ - 2.3, PAO₂ - 132, PCO₂ - 8 normal anion gap,) BP- 100/60 mmHg, PR-120/min, she was dehydrated, afebrile, CBS- 280 mg/dl. She was admitted to ITU and was given bicarbonate, hydrated with NS, RL. CVP was 3-4 mmHg. Investigation revealed creatinine 2.4 mg/dl, urea-48 mg/dl, Na+ 151 meq/l, K-2.7 meq/l, HB-8.7, PCV- 81, TLC-9010. Lactate 0.7, CRP- 23.2 mg/l. Blood C/S, urine C/S, stool RE and C/S were normal. Meanwhile recent history revealed that she had started olmesartan on her own after discharge. Screening for other causes like inflammatory bowel disease, Neuroendocrine tumor were also excluded. Capsule endoscopy did not show significant scolapping, inflammation, ulcer or mass. Serum chromogranin, fasting gastrin and urine 24 hrs HIAA were normal (Figure 2) Capsule endoscopy.

She recovered with normal electrolytes and creatinine within 48 hours and was discharged and was categorically instructed not to restart olmesartan. She was followed up for 1 year and she remained asymptomatic, tolerating normal diet. Repeat UGI scopy and duodenal biopsy were nonspecific. She was discharged and was categorically instructed not to restart olmesartan. She recovered with normal electrolytes and creatinine within 48 hours and was discharged and was categorically instructed not to restart olmesartan. She was followed up for 1 year and she remained asymptomatic, tolerating normal diet. Repeat UGI scopy and duodenal biopsy were nonspecific.

DISCUSSION

The constellation of diarrhoea, malabsorption and villous atrophy raises the possibility of coeliac disease. Negative coeliac serology or nonresponse to a gluten-free diet implies a broad and challenging differential diagnosis which includes Crohn’s disease, enteric infections (e.g. giardiasis), collagenous sprue, tropical sprue, Small intestinal bacterial overgrowth, common variable immunodeficiency, autoimmune enteropathy, hematological malignancies, HIV enteropathy and medication-associated enteropathy (1-3).

Drug causing enteropathy, include azathioprine, mycophenolate mofetil, neomycin, methotrexate, colchicine and angiotensin receptor blocker, like olmesartan. Telmisartan causing enteropathy like symptoms has also being reported (4,5).

Olmesartan induced enteropathy which is often indistinguishable from coeliac disease poses a diagnostic chalange. It usually happens several months (6 m-1 yr) after initiation (2).

The adverse effects can be seen with any dose from 10 mg to 40 mg/day 1.

Most common symptoms are chronic diarrhoea, weight loss, anorexia, fatigue normocytic normochromic anaemia, hypoalbuminemia and multiple electrolye abnormalities. Dehydration and acute renal failure have been reported as the main causes of hospitalization (1) there are case report of olmesartan causing dermatological changes. A case of colonic perforation has also been documented (6).

Our patient had severe diarrhoea with acute kidney injury and metabolic acidosis, anaemia and hypokalemia but without significant weight loss. Prevalence of HLA-DQ2 has been documented in 68% of patients with olmesartan-associated enteropathy, higher than for the general population (25%-30%) (1,7,8).

Histologically intestinal atrophy, mucosal inflammation, lymphocytic infiltration has been described. In one series, it has been found that 92/100 patients (92%) had total or partial villous atrophy, 5% had normal villi, 2% had increased IEL (25 or more per 100 enterocytes). Involvement of stomach and colon have also been described (8-12).

Clinical and histological improvement occurs earliest 48 hours and 6 months after withdrawal of olmesartan respectively (10).

Immune mediated damage attributed to increased TGF beta leading to apoptosis of endothelial cells (4,6,7,9,10,13).

CONCLUSION

This case report highlights a rare but devastating form of diarrhoeal disease resulting from a commonly prescribed antihypertensive olmesartan which needs wide appraisal.

REFERENCES