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## Studies on Celiac Disease in UAE

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### Abstract

Celiac disease occurs in about 1% of people in most populations. The time taken to make the diagnosis may go to years or more than 10 years. The disease affects people of all ages. The disease has many clinical manifestations, ranging from severe malabsorption to minimally symptomatic or non-symptomatic presentation. Presentations can be, persistent unexplained abdominal or gastrointestinal symptoms, failure of growth, prolonged fatigue, unexpected weight loss, severe or persistent mouth ulcers, unexplained iron, Vitamin B12, or folate deficiency, type 1 diabetes, autoimmune thyroid disease, irritable bowel syndrome. Other presentations can be, infertility, epilepsy, arthritis, and hypothyroidism. 2 studies done in UAE in pre marriage adults showed a prevalence of 2.3% in our practice in our centre ACDS centre we came across a variety of presentations including, reflux esophagitis, anemia,allergy,hypothyroidism,epilepsy,after bariatric surgery,transaminitis. Over 150 cases of celiac disease seen over the last 7 years the majority of cases were missed by clinicians. Awareness campaigns are needed to raise awareness.

### Introduction

Celiac disease is the most common genetic auto immune disease, and the most missed disease, was Once thought to be very rare and affect only European population but all international studies showed that the disease affect all the continents with prevalence of about 1%. The time taken to make the diagnosis may go to more than 10 years. Studies in UAE showed 2.3% positive serology in pre marriage adults. In our experience in Iraq & UAE we came across a variety of presentations of celiac disease ranging from oesophageal reflux disease, Irritable bowel syndrome, anaemia, recurrent mouth ulcers, infertility, elevated liver enzymes, short stature, and obesity, association with inflammatory bowel diseases, ataxia and epilepsy. Few cases discovered because of lack of awareness of the disease by the health care workers. Celiac disease occurs in about 1% of people in most populations, more in UAE. Diagnosis rates are increasing, and this seems to be due to a true rise in incidence rather than increased awareness and detection. Celiac disease develops in genetically susceptible individuals who, in response to unknown environmental factors, develop an immune response that is subsequently triggered by the ingestion of gluten. The disease has many clinical manifestations, ranging from severe malabsorption to minimally Symptomatic or non-symptomatic presentations.

### Case studies

#### Case 1

Female 36 years old with persistent unexplained abdominal, persistent mouth ulcers, treated for many years as Irritable bowel syndrome laboratory tests showed hypothyroidism with positive thyroid antibodies, low serum iron, strongly positive celiac serology anti tTG 200 N 10Endoscopy serrated duodenal folds Figure 1,biopsy reported as duodenitis, second opinion subtotal villous atrophy Marsh 3 Figure 2.

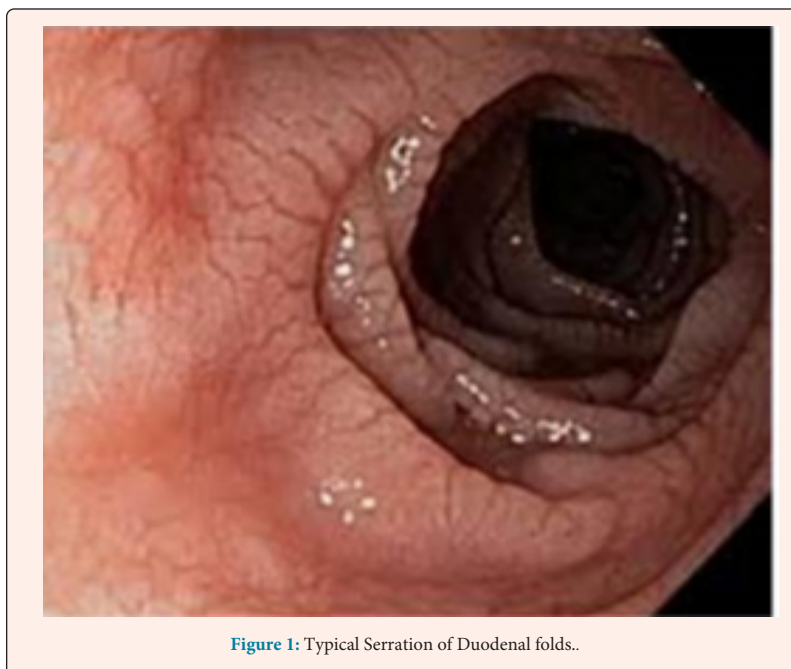


Figure 1: Typical Serration of Duodenal folds..

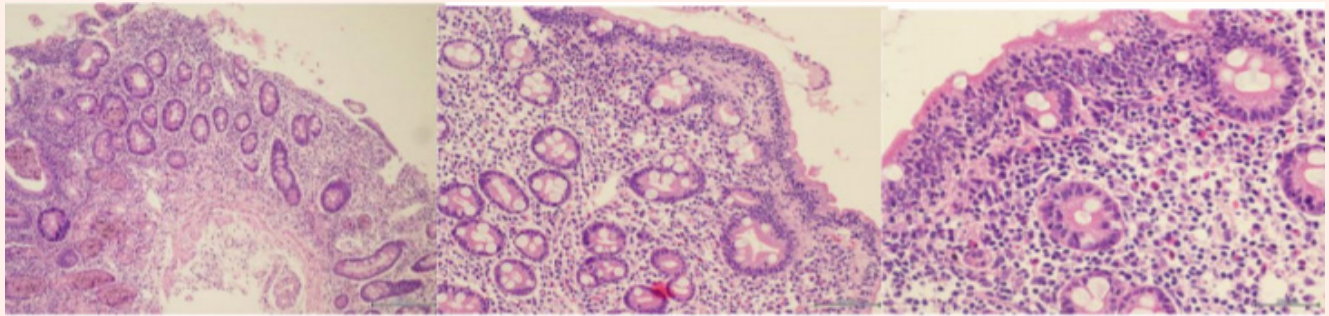


Figure 2: duodenal Biopsy subtotal villous atrophy Marsh 3.

**Case 2**

A female patient with a diagnosis of nephrotic syndrome was discovered to have classical celiac disease 6 years after the diagnosis of nephrotic syndrome. The patient is a 21 years old Emirati female presented with epigastric pain following 2 months treatment of acne by isotretinoin acid (roaccutane). Her history of nephritis (minimal change nephritis) started 2008 at age 11 years treated in the renal units in 2 major hospital in Abu Dhabi with steroids for 1 year and relapsed one year later, evaluated in the children's hospital abroad 2012, mycophenolate (cellcept) was added continued for 4 years stopped 2016. She was well until august 2016, treatment for itching & acne with anti-histamines & isotretinoin acid, and that resulted in abdominal pain that brought the patient to our attention. The diagnosis of celiac disease was made following the endoscopic appearance of scalloped folds & the positive biopsy , serology anti-tissue transglutaminase IgA over 200 N 10, Anti DPG Deamidated Anti Gliadin Ig G 43 N 10, & HLA DQ8 was positive. Her family history was impressive, The father was hypothyroid, mother diabetic, two brother with asthma, one brother has tremor and one accompanying brother was obese with abdominal pain and altered bowel habits and also discovered to have a positive celiac serology, positive HLA-DQ8,

HLA DQ 8 POSITIVE (HLA DQ A1\*-03, HLA DQ B1\*-0302).

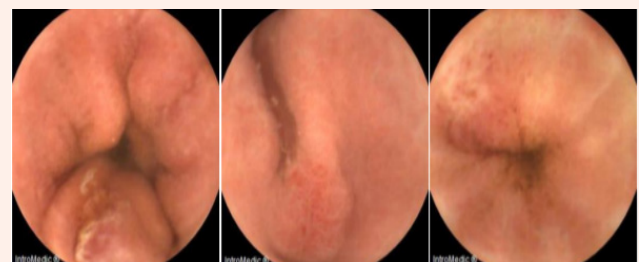


Figure 5: The video capsule showed multiple small bowel erosions suggestive of patchy celiac disease or early

Inflammatory Bowel Disease or vasculitis of the small bowel.

The studies on her family discovered one brother with celiac disease. Both patients improved on gluten-free diet, the association of nephrotic syndrome and celiac disease is rare in the literature. This is the first patient to our knowledge described in our area with celiac disease in a patient with nephrotic syndrome.

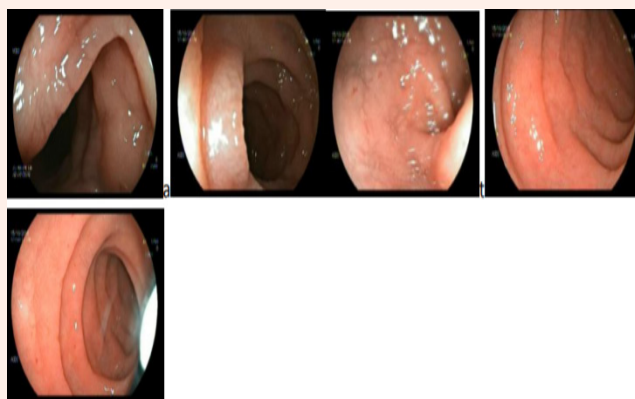


Figure 3: Gastroscopy: duodenitis with granular serrated folds.

**Discussion**

The incidence has been increasing over the last 20 years. The prevalence of celiac disease in the population varies between roughly one in 100 and one in 300 in most parts of the world. No gluten no celiac disease , The disease was unknown in 1900 ,in 1900-1950- European and USA typical celiac disease was seen in 1:5000, 1953 Dick discovered atypical celiac disease in 1:250, Now over 1% world population are affected and studies in UAE showed 2.3% prevalence. Celiac disease is being increasingly diagnosed because of the recognition that the disease may be present without significant intestinal symptoms, may be associated with other autoimmune disorders and may be suspected from serological screening Celiac disease occurs almost exclusively in patients who express the major histocompatibility complex HLA-DQ2 and HLA-DQ8 molecules. The highest incidence of celiac disease seroconversion is between 12 and 36 months of age. The low level of awareness of the disease leave many undiagnosed cases of CD among the general population. Health workers should be aware that there are many undiagnosed cases of CD among UAE nationals, any patients with vague symptoms, complications and/or signs suggestive of CD to be investigated as suspected CD case.

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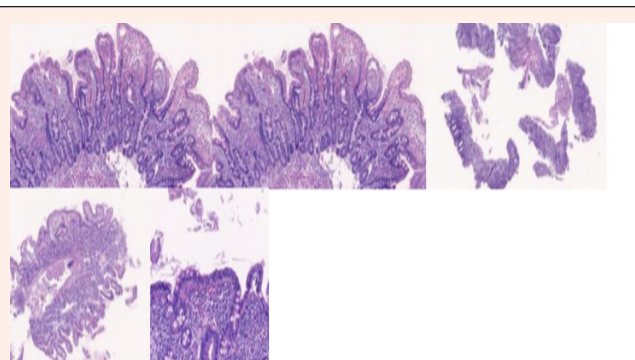


Figure 4: Small bowel biopsy show subtotal villous atrophy with intraepithelial lymphocytic infiltrateConsistent with celiac disease.



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