

# Enteron

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Dear Doctor,

Greetings from Micro Labs limited. We are happy to bring you “**ENTERON**” which contains latest and interesting news in the field of Gastroenterology.

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Should you require any specific article or medical information, please feel free to contact us at [medicalservices@microlabs.in](mailto:medicalservices@microlabs.in)

Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Ltd

## A case report of gastric Burkitt lymphoma with paraplegia and acute pancreatitis

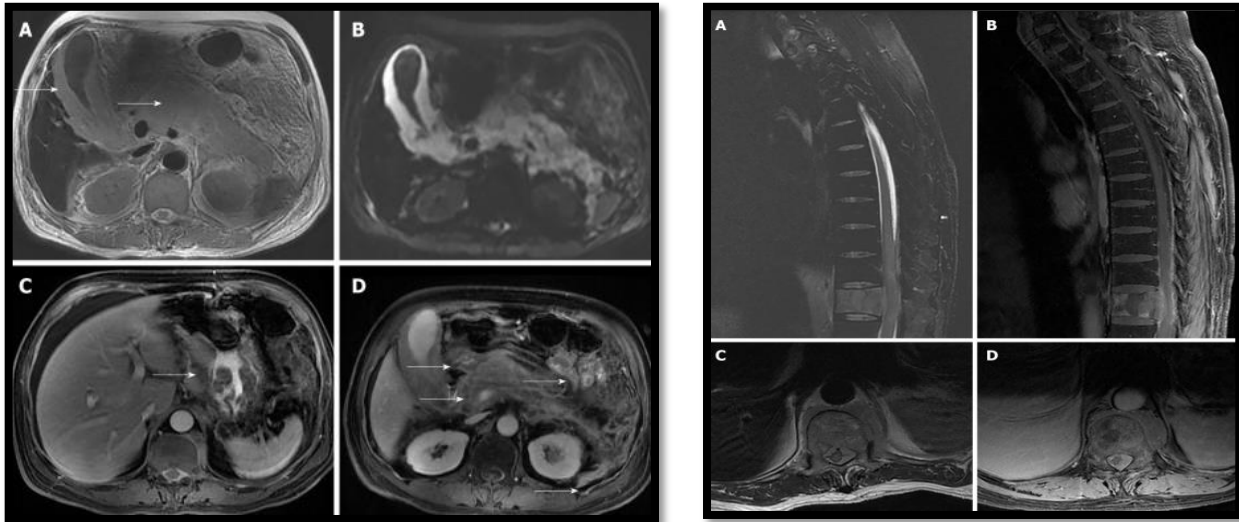
### Background:

Burkitt lymphoma (BL) is a type of high-grade non-lymphoma Hodgkin's (NHL) that has an aggressive clinical course and was initially identified in youngsters. Solid tumours, large lymph nodes, and symptoms comparable to acute leukaemia are common in individuals with BL, and bone marrow invasion is found in more than 25% of cases. According to the World Health Organization, BL is divided into three subtypes: sporadic type, endemic type, and immunodeficiency-associated type. BL was previously diagnosed mostly based on clinical symptoms, histological abnormalities, morphology, immunophenotype, and genetics. Adult patients with sporadic BL, particularly those with extensive stomach, pancreas, and spinal cord involvement, have received few reports.

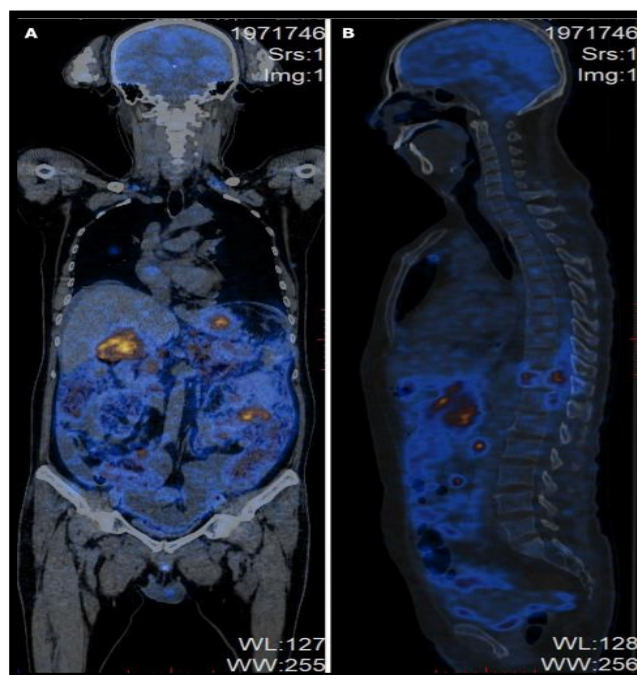
### Case Presentation:

A 53-year-old man with two weeks of abdominal pain and one day of lower extremity paralysis was admitted to the hospital. An enlarged pancreas and gallbladder, as well as peripancreatic exudation and liquid collection, were seen on magnetic resonance imaging of the abdomen and lumbar spine, indicating acute pancreatitis and acute cholecystitis. The gastric wall was abnormally thickened, there were multiple enlarged retroperitoneal lymph nodes, and there was a well-demarcated, posterolateral extradural mass lesion between T9 and T12, with extension through the spinal foramen and definite bony destruction, suggesting metastasis in gastric malignancy. Multifocal malignant lesions in the stomach, pancreas, gallbladder, bone, bilateral supraclavicular fossa, anterior mediastinum, and bilateral axillary and retroperitoneal lymph nodes were discovered during a subsequent whole-body positron emission tomography/computed tomography scan. Primary BL with significant invasion of the gastric body and duodenum was discovered during a gastroduodenal endoscopy. The patient declined chemotherapeutic treatment and died from an upper gastrointestinal haemorrhage one week later. Following that, researchers looked at the features of 11 patients who had BL in their stomach, pancreas, or spinal cord.

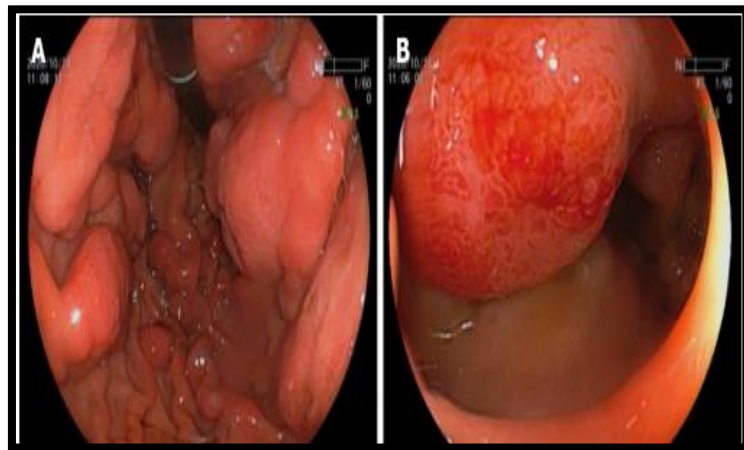
Magnetic resonance imaging of the abdomen at diagnosis and Magnetic resonance imaging of the thoracic and lumbar vertebrae at diagnosis



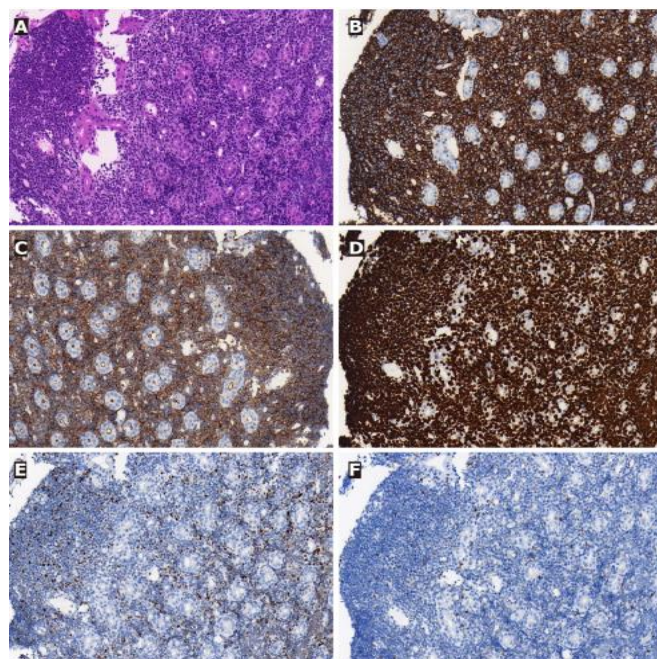
Positron emission tomography-computed tomography of the whole body at diagnosis



## Gastric endoscopy



## Histology and immunohistochemistry of gastric biopsies



## **Conclusion:**

This study demonstrated, the significant misdiagnosis rate and poor prognosis are due to the low incidence of BL and the atypical clinical signs. Malignant tumours arising from haematological malignancies, particularly BL, should be considered clinically if the disease is progressing unusually quickly, there are multiple afflicted sites, or tumour burden indicators are significantly raised. For the detection of BL, CT or MRI may be used, however PET/CT is required for staging. For a definitive diagnosis, a histological examination is required. Chemotherapy is the preferred method of treatment for BL. To reduce the risk of CNS relapse, prophylactic intrathecal methotrexate or cytarabine should be used.

## **Reference:**

Lin Y et al. Clinical presentation of gastric Burkitt lymphoma presenting with paraplegia and acute pancreatitis: A case report. World journal of gastroenterology. 2021 December 7; 27(45): 7844-7854.

## The use of a Cystic Fibrosis Transmembrane Conductance Regulator Modulator correlated to fewer hospitalizations for pancreatitis in patients with the disease

### Background:

The cystic fibrosis transmembrane conductance regulator (CFTR) keeps the pancreatic duct alkaline, neutralising acidic chyme and delivering proenzymes to the duodenal lumen in healthy people. CFTR dysfunction causes increased pancreas juice viscosity and acidity, which leads to ductal blockage, chronic inflammation, and progressive acinar cell loss in people with CF. The pancreas parenchyma eventually becomes fibrotic when acinar cells are destroyed, culminating in exocrine and endocrine insufficiency. Personalized CFTR modulator therapy, which targets several protein activity abnormalities, has evolved as a treatment for CF. There have been no substantial studies that have looked at the incidence of acute pancreatitis (AP) in patients who have been treated with CFTR modulators over time.

### Objective:

The patients with pancreas sufficient cystic fibrosis (PS-CF) should have fewer AP hospitalizations if they take CFTR modulator medication. This study also evaluates the impact of CFTR modulators on patients with PI-CF, with the hypothesis that the medication's impact would be reduced.

### Methods:

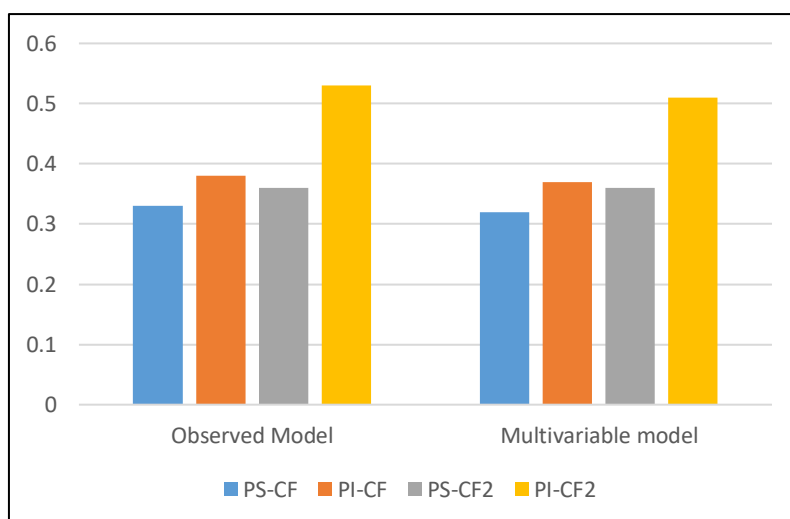
This study included a total of 10,417 participants with CF. From 2012 to 2018, the MarketScan database was used to conduct a retrospective analysis. Hospitalizations for AP were the major outcome of interest. The evaluation of medication use characteristics was a secondary result. The rate of AP hospitalizations on and off therapy was studied using multivariable Poisson models that allowed crossover between CFTR modulator treatment groups. The use of pancreas enzyme replacement therapy was used to define pancreas insufficiency.

### Results:

When compared to individuals who did not use CFTR modulators, a larger number of patients with CFTR modulator use had pancreatic insufficiency (84.5% versus 59.6%,  $P=0.0001$ ). Overall, the observed rate ratio of AP with CFTR modulator treatment was 0.33 (95 percent confidence interval [CI] 0.10, 1.11,  $P = 0.07$ ) for PS-

CF and 0.38 (95% CI 0.16, 0.89,  $P = 0.03$ ) for PI-CF, indicating a 67% and 62% relative reduction in AP hospitalizations, respectively. The rate ratio of AP with CFTR modulator usage was 0.36 (95% CI 0.13, 1.01,  $P = 0.05$ ) for PS-CF and 0.53 (95% CI 0.18, 1.58,  $P = 0.26$ ) for PI-CF in a subset analysis of 1,795 patients who all had some CFTR modulator use.

**Rate ratio for time on CFTR modulator vs not on CFTR modulator among the full study population and Rate ratio for time on CFTR modulator vs time not on CFTR modulator among patients with some CFTR modulator use**



**Estimated acute pancreatitis rates per 1,000 patient- years from multivariable model incorporating the full study population**

|                                                            | PS-CF               | PI-CF             |
|------------------------------------------------------------|---------------------|-------------------|
| On CFTR modulator, AP per 1,000 patient-years (95% CI)     | 3.26 (0.94, 11.33)  | 0.66 (0.26, 1.68) |
| Not on CFTR modulator, AP per 1,000 patient-years (95% CI) | 10.20 (6.19, 16.81) | 1.76 (0.98, 3.17) |

**Estimated acute pancreatitis rates per 1,000 patient-years from multivariable models among patients with some CFTR modulator use**

|                                                            | PS-CF               | PI-CF             |
|------------------------------------------------------------|---------------------|-------------------|
| On CFTR modulator, AP per 1,000 patient-years (95% CI)     | 4.65 (0.87, 24.78)  | 0.34 (0.08, 1.43) |
| Not on CFTR modulator, AP per 1,000 patient-years (95% CI) | 12.93 (3.47, 48.14) | 0.67 (0.15, 3.02) |

**Conclusion:**

The use of a cystic fibrosis transmembrane conductance regulator (CFTR) modulator is correlated to fewer acute pancreatitis (AP) hospitalizations in cystic fibrosis patients. These findings support the use of CFTR modulators in a prospective study to reduce AP hospitalizations in CF patients.

**Reference:**

Ramsey ML, et al. Cystic Fibrosis Transmembrane Conductance Regulator Modulator Use Is Associated With Reduced Pancreatitis Hospitalizations in Patients With Cystic Fibrosis. Am J Gastroenterol. 2021 Oct 19.

## Helicobacter pylori eradication may have a long-term effect on dyspepsia in the elderly

### Background:

Infection with *Helicobacter pylori* (*H. pylori*) is frequently linked to dyspepsia symptoms, and eradication of *H. pylori* has been shown to improve symptoms. Because the symptomatic gain takes at least 6 months to become significant over no eradication, and this has been attributed to the time it takes for gastritis to recover, *H. pylori*-associated dyspepsia (HPD) is defined in that report as sustained symptomatic relief for 6 to 12 months after eradication.

### Objective:

This study examined the long-term effects of *H. pylori* eradication therapy on the symptoms of dyspepsia in older people.

### Methods:

In this retrospective investigation, 496 individuals who had *H. pylori* eradication therapy were included. A group of elderly patients (group E: 65 years old) and a group of non-elderly patients (group N: 65 years old) were separated. A questionnaire concerning stomach symptoms was used to assess abdominal symptoms before and after eradication (1–2 months and more than one year). A score of 4 points or more for at least one of four criteria was defined as dyspepsia (postprandial fullness, early satiety, epigastric pain, and hunger pain). Changes in Global Overall Systems scores were used to determine symptom improvement.

## Dyspepsia before and after successful eradication

|                                                   | Group N (n=203) | Group E (n=99)  | P    |
|---------------------------------------------------|-----------------|-----------------|------|
| Mean age at H. pylori eradication, years $\pm$ SD | 51.4 $\pm$ 9.9  | 70.6 $\pm$ 4.85 | -    |
| Sex (men/women)                                   | 87/116          | 34/65           | 0.17 |
| Patients with dyspepsia before eradication, n (%) | 74 (36.5)       | 31 (31.3)       | 0.44 |
| Improvement in dyspepsia after eradication, n (%) | 56/74 (75.6)    | 20/31 (64.5)    | 0.34 |

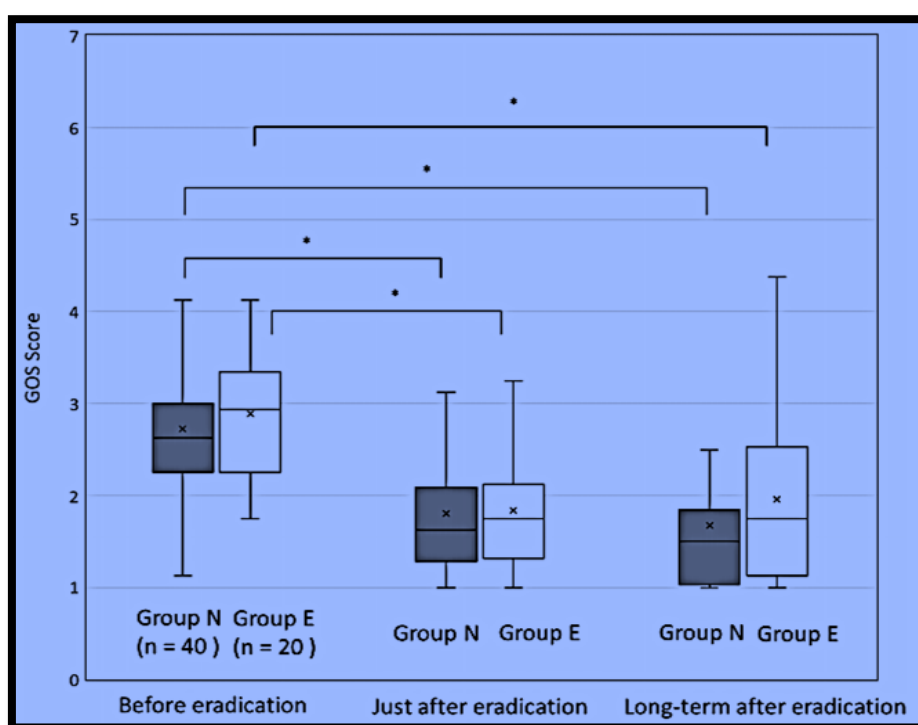
### Results:

There were no differences in abdominal symptoms between the two groups before eradication. In patients with dyspepsia, successful eradication relieved symptoms in 75.6% (56/74) of patients in group N and 64.5% (20/31) of patients in group E within two months. According to the survey, 80 percent (32/40) of patients in group N and 60% (12/20) of patients in group E experienced long-term dyspepsia relief. After eradication, the scores for abdominal symptoms in group E improved for an average of 54.8 months.

## Long-term follow-up of dyspepsia symptoms after successful eradication

|                                                                          | Group N (n=40) | Group E (n=20) |
|--------------------------------------------------------------------------|----------------|----------------|
| Sex (men/women)                                                          | 17/23          | 9/11           |
| Mean age at H. pylori eradication, years (range)                         | 52.4 (17-64)   | 70.0 (65-76)   |
| Mean period between eradication and 3rd questionnaires, months (range)   | 61.3 (15-124)  | 54.8 (12-116)  |
| Patients who met the definition of H. pylori-associated dyspepsia, n (%) | 32 (80)        | 12 (60)        |

## Changes in GOS scores based on questionnaires



### Conclusion:

This study demonstrated, *H. pylori* eradication improved dyspepsia symptoms regardless of age. For senior patients with dyspepsia symptoms, a test and treat strategy for *H. pylori* may be indicated.

### Reference:

Tanaka I, et al. Eradication of *Helicobacter pylori* may improve dyspepsia in the elderly for the long term. BMC Gastroenterol. 2021 Nov 25;21(1):445.



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