

13th Euro-Global Gastroenterology Conference

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Bashar Attar

Cook County Health and Hospitals System, USA

Subclinical exocrine pancreatic insufficiency (EPI): A disease that merits treatment

Introduction: Exocrine pancreatic insufficiency (EPI) is one of the long-term consequences of chronic pancreatitis (CP). Majority of patients with EPI are undiagnosed or undertreated.

Study Design: We prospectively evaluated 200 consecutive individuals seen in a pancreatic outpatient practice. These individuals were screened on 2 occasions to determine their baseline stool elastase excretion. The 200 individuals were segmented into 4 distinct groups: a) "Normals" (n=105) with stool elastase >500 ug/g stool, received no treatment; b) "Minimal EPI" (n=60) with stool elastase >200 to <500 ug/g stool, received 3000 IU of a standard pancreatic enzyme preparation (Creon) with their 2 ingested meals; c) "Moderate EPI" (n=23) with stool elastase >100 to 200 ug/g stool, received 12,000 IU of the same pancreatic enzyme preparation with each meal; d) "Severe/Overt EPI" (n=12) with stool elastase <100 ug/g stool, received 24,000 IU of the same pancreatic enzyme preparation with each meal and with a bedtime snack.

Results: These groups presented with abdominal pain, bloating, flatulence, diarrhea, large bulky stools, and greasy stools. Symptoms were graded (1-10) at entry and monthly for 3 months. Symptom scores decreased in all groups. The response to therapy was maximal in those with most severe disease identified by their greatest reduction in stool elastase at entry. Lesser responses were seen in the other groups and mirrored the severity of the disease at entry as defined by their stool elastase levels.

Conclusions: We conclude that 1) pancreatic elastase in stool enable the segmentation of individuals into distinct subgroups of EPI. 2) pancreatic elastase in stool enables identification of not only overt EPI but those with minimal and moderate EPI. 3) therapy with pancreatic enzyme preparations can be individualized based upon the concentration of pancreatic elastase in stools. 4) individuals with "subclinical" EPI with stool elastase level of 100-500 improve with treatment.

Recent Publications:

1. Wang Y and Attar B M (2017) Comment on Comparison of BISAP, Ranson, MCTSI, and APACHE II in predicting severity and prognoses of hyperlipidemic acute pancreatitis in Chinese patients. *Gastroenterol. Res. Pract.* 2017:1426486. Doi:10.1155/2017/1426486.
2. Wang Y et al. (2017) Evaluation of the prognostic value of neutrophil to lymphocyte ratio in patients with hypertriglyceridemia-induced acute pancreatitis. *Pancreatology.* 17(6):893-897. Doi:10.1016/j.pan.2017.10.001.
3. Wang Y et al. (2017) Concurrent diabetic ketoacidosis in hypertriglyceridemia-induced pancreatitis: how does it affect the clinical course and severity scores? *Pancreas.* 46(10):1336-1340. Doi:10.1097/MPA.0000000000000937.
4. Walter R J et al. (2012) Newcastle disease virus LaSota strain kills human pancreatic cancer tumor cells *in vitro* with high selectivity. *Journal of Pancreas.* 13(1):45-53.
5. Walter R J (2012) Two avirulent, lentogenic strains of Newcastle disease virus are cytotoxic for some human pancreatic tumor lines *in vitro*. *Journal of Pancreas.* 13(5):502-513. Doi: 10.6092/1590-8577/977.

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Biography

Bashar M Attar is a Professor of Medicine and Surgery at Rush University Medical Center in Chicago, Illinois, USA. He is also the system-wide Chairman of Gastroenterology and Hepatology at Cook County Health and Hospitals System. He has special interest acute and chronic pancreatitis as well as potential mechanisms contributing to pancreatic cancer. He has an avid interest in viral hepatitis, metabolic and cholestatic liver disorders including bile transport. He is the Recipient of the President Diversity Award by the ASGE (2010); Recipient of the prestigious National "Parker J Palmer Courage to Teach Award" by the ACGME (2015) which was granted in recognition of extraordinary accomplishment in Graduate Medical Education. He has been recently elected (2017) to the Humanism Honor Society in recognition of exemplary service, integrity, clinical excellence and compassion.

battar@rush.edu