anti-PD-L1 checkpoint blockade, leading to eradication of large tumor. More importantly, HDAC8 and PD-L1 co-blockade resulted in long-term survival (more than 1 year) with the induction of T cell memory responses.

Conclusions Our finding delineates that selective chromatin modifications by HDAC8 can augment the therapeutic efficacy of PD-L1 blockade therapy to fully unleash T cell responses, leading to long-term remission of HCC. This study highlights a new epigenetic target for immune potentiation in HCC, providing a rational combinatorial epigenetic immunotherapy.

IDDF2019-ABS-0326 EVALUATION OF THE EFFECTS OF THE HYDROALCOHOLIC EXTRACT OF LIV.52 DS ON PARACETAMOL INDUCED LIVER TOXICITY AND OXIDATIVE STRESS IN RATS

Arun Gandhi*, Priya Kakkar. Faculty of Life Sciences, Maharshi Dayanand University, Rohtak, Haryana, India

10.1136/gutjnl-2019-IDDFabstracts.111

Background Oxidative stress induced by toxicants is known to cause various complications in the liver. Herbal drug such as Liv.52 is found to have a hepatoprotective effect. However, the biochemical mechanism involved in the Liv.52 DS mediated protection against toxicity is not well elucidated using suitable in vivo models. Paracetamol causes oxidative stress and dysfunction of the liver.

This study was undertaken to evaluate the effects of the hydroalcoholic extract of Liv.52 DS on some biochemical and histopathological parameters of liver tissue in against paracetamol-induced hepatic damage in rats.

Methods Wistar rats were orally administered with 2 g/kg body weight Paracetamol. Vehicle (distilled water) and silymarin (50 mg/kg body weight) was used as the negative and positive control groups, respectively. Paracetamol-administered groups were treated with Liv 52 DS extract (100, 200, and 400 mg/kg). After 15 days of treatment, the blood specimens and liver samples were examined. Alteration in the levels of biochemical markers of hepatic damage like AST, ALT, ALP and lipid peroxides were tested, and phytochemical tests were also performed.

Results In Paracetamol-treated group, the levels of serum urea, high-density lipoprotein (HDL), and liver superoxide dismutase (SOD), catalase (CAT), and vitamin C significantly decreased ($p < 0.05$) compared to control. Also, in this group, serum triglyceride (TG), total cholesterol (TC), very low-density lipoprotein cholesterol (VLDL), protein carbonyl (PC), malondialdehyde, tumor necrosis factor- α (TNF- α), and TNF- α gene expression significantly increased ($p < 0.05$) as compared to the control (vehicle-treated rats). Treatment with Liv. 52 DS extract in a significant increase ($p < 0.05$) in CAT, SOD, vitamin C, HDL and a significant decrease ($p < 0.05$) in the level of urea, MDA, PC, TG, TC, VLDL, TNF- α protein, and the gene expression of TNF- α compared with the test without treatment group. Histopathological evidence demonstrated that treatment with Liv.52 DS extract could decrease liver lymphocyte infiltration.

Conclusions The present study suggests that Liv. 52 DS extract possesses hepatoprotective activity. It could be an effective and promising preventive agent against Paracetamol-induced hepatotoxicity.

IDDF2019-ABS-0334 CLINICAL ESCHERICHIA COLI NF73-1 ISOLATED FROM A PATIENT WITH NONALCOHOLIC STEATOHEPATITIS INDUCES LIVER INJURY THROUGH IMPAIRING INTESTINAL BARRIER FUNCTION AND INDUCING INFLAMMATORY RESPONSES OF HEPATOCYTES

Yang Song*, Zhe Wu, Jun Xu, Yujing Chi, Yifan Zhang, Yulan Liu. Peking University People's Hospital, China

10.1136/gutjnl-2019-IDDFabstracts.112

Background Gut microbiota plays critical roles in nonalcoholic fatty liver disease (NAFLD). We have previously isolated and identified one clinical *Escherichia coli* (*E. coli*) strain from the intestinal mucosa of a nonalcoholic steatohepatitis (NASH) patient, and named it as *E. coli* NF73-1. Our aim is to investigate the role of *E. coli* NF73-1 in the development of NAFLD in a high-fat diet (HFD) mice.

Methods Conventional (CV) mice, plus mice treated with antibiotics (AB) to deplete gut microbiota, were fed with HFD for 12 weeks. At the 10th week, mice were treated daily with oral gavage of LB, live-NF73-1, or pasteurized-NF73-1 (pas-NF73-1) for 2 weeks. AB mice were treated in drinking water containing 1 g/L ampicillin, 500 mg/L vancomycin, 1 g/L neomycin, and 1 g/L metronidazole for 4 weeks, starting at 6th week. In vitro bacterial translocation and transepithelial permeability assay was performed. Primary hepatocytes from NAFLD mice were cocultured with NF73-1 to evaluate inflammatory responses.

Results Live-NF73-1 group developed severer liver pathology than LB and pas-NF73-1 groups in both CV and AB mice, verified by increased NAFLD activity (NAS) score. Besides, intestinal permeability was higher in live-NF73-1 group than that in LB and pas-NF73-1 groups of both CV and AB mice, supported by decreased expression of ZO-1 and Occludin in the colon. In vitro bacterial translocation and transepithelial permeability assay indicated that HT-29 cells treated with live-NF73-1 developed a higher concentration of translocated bacteria and FITC fluorescein than LB and pas-NF73-1 groups. Interestingly, live-NF73-1 decreased mRNA levels of ZO-1, Occludin and Claudin2 in Caco2 cells, and downregulated mRNA expression of Claudin2 and E-cadherin in HT-29 cells compared with LB and pas-NF73-1 groups. NF73-1 also induced inflammatory responses of primary hepatocytes, supported by increased IL-6 expression.

Conclusions Clinical *E. coli* NF73-1 aggravates liver injury in NAFLD mice, through impaired intestinal integrity and inflammatory responses in hepatocytes. These findings provide new insights on management using specific bacterial strain.

Clinical Gastroenterology

IDDF2019-ABS-0013 CELIAC CRISIS IN AN ADULT TYPE 1 DIABETES MELLITUS PATIENT PRESENTING WITH DIARRHEA, WEIGHT LOSS AND HYPOGLYCEMIC ATTACKS- A RARE ENTITY

Shivam Shivam*, Pratibha Nadig, Vijaya Sarathi, Manohar KN. Vydehi Institute of Medical Sciences and Research Centre, India

10.1136/gutjnl-2019-IDDFabstracts.113

Background Type 1 diabetes mellitus (T1DM) is an autoimmune disease, characterized by loss of insulin-producing beta

cells of the islets of Langerhans in the pancreas, causing insulin deficiency. Celiac disease (CD) has been seen in 3 to 8% of T1DM patients. Celiac disease is characterized by impaired immunological response to ingested gluten. Gluten consumption might be a shared causative factor for the development of T1DM and CD. Celiac crisis is a life-threatening condition in which CD causes acute dramatic metabolic dysregulation.

Methods A 52-year old lady with a 10-year history of type 1 diabetes mellitus presented with 2-months history of diarrhea associated with loss of appetite, nausea, pain abdomen, and weight loss of 13 kg.

Initial laboratory findings revealed hyperglycemia, metabolic acidosis with hyperchloremia, hypokalemia, hypocalcemia, and hypoalbuminemia. She also had iron and folate deficiency. Haemoglobin level was 9.4 g/dl. HIV status and viral hepatitis serology were negative, and stool examination did not suggest an infectious etiology.

For evaluation of diarrhea, serological blood test for celiac disease was done; antiendomysium antibodies of the immunoglobulin A (anti EA IgA) was 158.7 U/ml (normal: 0–20 U/ml), tissue transglutaminases of immunoglobulin A (tTGA IgA) was >200 U/ml (normal: 0–20 U/ml). Histological findings of duodenal biopsy post endoscopy were consistent with celiac disease grade 3 according to the Marsh classification. After the introduction of the gluten-free diet, she gained weight, her metabolic abnormalities resolved with better glycemic control.

Results After excluding other reasons of acute diarrhea and based on the patient's findings including metabolic acidosis, hypoproteinemia, hypocalcemia, hypokalemia and weight loss of 13 kg, our patient was diagnosed with celiac crisis. Advising a gluten-free diet results in prompt and dramatic improvement in the patient's symptoms.

Conclusions In the literature, celiac crisis in adults have rarely been notified, and for this reason, celiac disease rarely is considered in adults presenting with acute severe diarrheal illness, even when infectious etiologies have been excluded. A type 1 diabetic patient who presents with severe unexplained diarrhea and malabsorption should be tested for celiac disease.

IDDF2019-ABS-0014

GASTROINTESTINAL SYMPTOMS AMONG HOSPITALIZED CHILDREN ADMITTED WITH H1N1 INFECTION: A REPORT FROM A TERTIARY HOSPITAL IN NORTH INDIA

Deepak Kumar*, Garima Gupta, Urmila Jhamb. MD, Pediatrics, India

10.1136/gutjnl-2019-IDDFabstracts.114

Background H1N1 influenza A virus has caused massive morbidity and mortality worldwide and still is a threat. Clinical profile from adult patients had emerged from 2009 and 2015 outbreak, very little data is available on pediatric patients especially those requiring hospitalization. Due to adverse biological nature of the virus which involves structural and antigenic modifications, the clinical presentation also needed to be updated. There are several reports available among all hospitalized patients infected with H1N1 in 2009 outbreak from India and other affected countries. However, pediatrics data was scarce.

Methods A study was conducted on the children below 12 years who were H1N1 confirmed cases and required hospitalization. Confirmation was made using throat swab PCR

identification of the virus. A total of 22 patients were included during the course of the outbreak.

Results In this study, we have discussed the clinical profile of 22 confirmed patients (table. 1). We have observed that apart from the fever and respiratory symptoms (cough, coryza, RD) patients also presented with GIT symptoms (vomiting, diarrhea & pain abdomen). There are few other studies had observed GIT symptoms in confirmed swine flu patients. Apart from the presenting symptoms, we have observed that these symptoms progress rapidly over a few days, the patient may present with respiratory distress of varying severity. However, it is seen that the presence of hypoxia is significant. We have seen that patients in whom antiviral therapy was initiated initially (< 72 hours), all of them had improved.

Abstract IDDF2019-ABS-0014 Table 1

S. No.	Characteristics	Number	Percentage
1. Symptoms	Cough/Coryza	22	100%
	Fever	22	100%
	RD	20	90%
	Mild	6	50%
	Mod	3	22.7%
	Severe	11	27%
	Vomiting	5	18%
	Diarrhea	6	
	Pain Abdomen	4	
2. Spo2	>94	8	
	94–90	4	
	90–80	7	
	<80	3	
3. Complications	ARDS	3	13.6%
	Pulmonary Bleed	5	22.7%
	Shock	5	22.7%

Conclusions Early identification of illness, initiation of therapy & support can modify the disease outcome. Presence of risk factors and pre-illness morbidity in patients acquired H1N1 infection needs strict monitoring and aggressive treatment. Patients presenting with GIT symptoms especially during the outbreak period should not be ignored for H1N1 infectivity.

IDDF2019-ABS-0015

EFFECT OF GLUTEN-FREE DIET ON NUTRITION OF NEWLY DIAGNOSED CHILDREN WITH CELIAC DISEASE

Madhavi Bharadwaj*, Anand Prakash Dubey, Seema Kapoor. Department of Pediatrics, Maulana Azad Medical College, India

10.1136/gutjnl-2019-IDDFabstracts.115

Background Celiac disease(CD) is a common, often neglected health care problem with avoidable mortality and morbidity in the Indian population with a prevalence of 0.9 to 1%. We studied the effect of gluten-free diet(GFD) on nutrition of newly diagnosed children in our population where multiple causes of malabsorption coexist. We also aimed at formulating an optimum follow up schedule according to the expected change in nutritional parameters and avoid unnecessary hospital visits and blood investigations

Methods 51 children with no known chronic disorder, between 1 - 10 years, diagnosed with CD were enrolled.