monitor of map the intersection(s) of nephrology data in relation to CKD via wearable technology (MI band and Yu band). To study effects of daily life routine activities on data by a wearable device that can obtain real-time CKD data, help technologists understand medical aspects, and clinicians to understand technological processes them and provide assistance based on pre-determined specifications in CKD patients in New Delhi, India.

Methods Total of 78 CKD patients were taken as a subject with an equal ratio of male and female at university college of medical sciences, New Delhi, India. Wearable monitoring devices were put on the wrist of CKD patients for 30 days, and a questionnaire was filled out by each patient. Both diabetes and cardiovascular disease, in turn, are known as important factors for developing CKD and aggravation toward once end-stage renal disease. In all subjects, blood glucose was measured on daily basis with day to day data of their monitoring of step count, blood pressure, calorie burnt, insulin dose, motion time i.e. every time when your body was in motion, sleep monitoring (deep sleep, light sleep, wake up time), monitoring heart rate, cardiac arrhythmias to know daily routines and recording them for health purpose.

Results Present results showed that both wearable device readings showed there was a normal heart rate, more calorie burnt with better control of sugar control and average good sleep count in more physically workout, include walking in stroke patients compared to less physically workout CKD patients, identified by professional physiotherapists. Both device readings showed that after changing lifestyle routine among less physically active CKD patients, their post-CKD events normalise.

Conclusions With this study we show that, by using, these wearable devices ensured online assistive feedback for CKD patients is possible with their health awareness, exercising and motivate further studies.

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BENEFICIAL EFFECTS OF SILYBUM MARIANUM SEED EXTRACT AGAINST HEPATIC FIBROSIS INDUCED BY CARBON TETRACHLORIDE IN RATS

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Background *Silybum marianum* or milk thistle is the most well-researched plant in the treatment of liver disease. Silymarin, derived from the milk thistle plant, silybum marianum, has been used for centuries as a natural remedy for diseases of the liver and biliary tract. The current study aimed to investigate the *silybum marianum* seed extract as hepatoprotective agent verse hepatic damages caused by carbon tetrachloride (CCl₄).

Methods Male Wistar albino rats were divided into two equal groups (n=8) and treated as follows: Group 1, kept as control group and orally given saline; Group 2, kept as control positive and were administered daily oral doses of silymarin (50 mg/kg) daily for 21 days and subsequently injected i.p. with CCl₄ (50% v/v in olive oil; 1 ml/kg) on the 22nd day. CCl₄-induced damages were assessed through liver function markers viz.; alkaline phosphatase (ALP), alanine transaminase (ALT), aspartate transaminase (AST), γ-glutamyltransferase (γ-

GT) and lactate dehydrogenase (LDH). Changes in lipid profile were checked by measuring serum total cholesterol (TC), triglycerides (Tg), high-density lipoproteins (HDL) and low-density lipoproteins (LDL). Antioxidant status was checked by the activities of antioxidant enzymes (superoxide dismutase, glutathione peroxidase), DNA damages, malondialdehyde (MDA) and nitric oxide (NO) content. The histopathological changes were observed with Masson staining.

Results Administration CCl₄ induced an elevation of serum amino- and glutamyl transferases activities and an increased peroxidation, as well as a decrease of superoxide dismutase and glutathione peroxidase activities in the liver. Administration of CCl₄ in rats caused a significant increase in liver function and lipid profile indicating hepatic damages which were restored by co-administration of silymarin. Cellular and DNA damages in hepatic tissues were caused by CCl₄ which shown clear hepatic fibrosis in addition to disturbing antioxidant enzyme level. Co-treatment with silymarin regulated these markers of oxidative dysfunctions. Silymarin enhances hepatic glutathione and may contribute to the antioxidant defence of the liver.

Conclusions It may be concluded that silymarin has the ability to reverse CCl₄ induced hepatic damages. Silymarin has been used to treat alcoholic liver disease, acute and chronic viral hepatitis and toxin-induced liver diseases.

Clinical Gastroenterology

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FOREIGN BODY INGESTION: 4 CASES WITH DIFFERENT MANAGEMENT APPROACH

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Background We managed four cases of ingested foreign bodies located in oesophagus and stomach differently. There are specific guidelines for the management of FB ingested in paediatrics age group depending upon type, size, symptoms and location in the digestive tract.

Methods Our first two cases were of ingested button battery which is blunt or non-sharp type contain corrosives, small in size (<2 cm diameter) and were impacted in the oesophagus, both the patients presented to us late by day 4 and 5. Both presented with symptoms of a cough, dysphagia, vomiting and respiratory distress later diagnosed tracheoesophageal fistula and needed surgical correction. Our third case was a 5 years old patient who had ingested a coin, which is blunt in type, was exactly 2 cm in diameter and was located in the stomach. As per guidelines he was followed serially for location by X-ray and symptoms but was later removed endoscopically, as coin had not passed the stomach outlet by the 4th week and had a risk of mucosal injury, although the patient was asymptomatic. Our fourth case had ingested small blunt plastic toy part which was initially impacted in oesophagus before referred to us. FB was tried to be removed endoscopically from oesophagus as soon as diagnosed with X-ray but was pushed down to the stomach during the procedure. In this case, the patient was further observed by us since the FB reached the stomach which was later found passed spontaneously in stool on day 6 after endoscopic failure.

Results With reference to our cases, we review the management protocols for ingested FB in paediatrics patients.

Conclusions Urgent Endoscopic removal (within 2 hours) is indicated in-

- All symptomatic patients • Sharp foreign body • Esophageal foreign body • Foreign body in the stomach if-
Age <5 years- >2 cm in diameter and >5 cm in length
Age >5 years- >2.5 cm in diameter and >6 cm in length
- Non urgent endoscopic removal should be followed in-
• Magnetic foreign bodies within 24 hours • Ingested button batteries in stomach impacted for >48 hours • Blunt small nontoxic foreign body in the oesophagus for more than 24 hours.

IDDF2018-ABS-0002

ESOPHAGEAL DUPLICATION CYST: DIAGNOSTIC DIFFICULTY IN PAEDIATRIC PATIENTS PRESENTING WITH RECURRENT CHEST INFECTION AND WHEEZE

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Background Esophageal Duplication Cyst (EDC) is a very rare congenital anomaly. It may present with respiratory and feeding difficulty depending upon the location in the oesophagus. We are reviewing this rare congenital malformation affecting the children who presented to us with the main symptom of recurrent chest infection and stridor.

Methods Our first patient is a 2 years 6 months old female child who had complaints of recurrent chest infections and stridor onset at 6 months of age. The child develops a cough, fever, fast breathing, retractions and stridor during each episode, these symptoms respond to the treatment for few weeks and then reoccurs. At 13 months of age, the child developed pneumonia, which was persisting, for which CECT chest was done. A cystic lesion adjacent to oesophagus was found suggestive of EDC. Our second case is an 11 months old female child who was well until 5 months of age had a history of recurrent chest infection and stridor on and off. The child develops a cough, fast breathing, retractions, noisy breathing (stridor) which response to medical treatment and then reappears after few weeks. On introduction of weaning food to the child, parents noted that child develops vomiting, regurgitates given a meal, and had choking like symptoms. These symptoms were more when given meal was semisolid (impacting) inconsistency and were increasing gradually. With these symptoms child brought to us. Chest X-ray done had shown tracheal deviation, CECT done revealed cystic lesion suggestive of EDC. In both cases, the diagnosis was confirmed by histopathological analysis of specimen removed surgically. On follow-up, patients were found healthy and asymptomatic.

Results Diagnosis of EDC is difficult but should be thought of after excluding common causes of persistent or recurrent wheeze, distress, stridor, vomiting and dysphagia. If missed, serious complications like rupture of the cyst, secondary infection, mediastinitis and malignant transformation can occur.

Conclusions EDC is a rare finding but should be included in patients presenting with recurrent wheeze and stridor, CECT is the diagnostic modality.

Abstract IDDF2018-ABS-0002 Figure 1

IDDF2018-ABS-0003

COMPARISON OF PERFORMANCE OF IMMUNOASSAY BASED 'CELIAC CARD' AND HUMAN ANTI-TISSUE TRANSGLUTAMINASE ANTIBODY ELISA KIT FOR CELIAC DISEASE

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Background Serum levels of immunoglobulin A-tissue transglutaminase antibodies (IgA-tTG) by commercially available enzyme-linked immunosorbent technique (ELISA) are accepted as the best serology screening tool for celiac disease. ELISA based IgA-tTG tests are available only in centralised laboratories, and testing requires expert personnel in ideal conditions and therefore a long testing time. 'Celiac card' is recently developed rapid and sensitive one step immunoassay test based on detection of IgA. The objective of the study was to validate the diagnostic performance of immunoassay based 'celiac card' and compare it with human anti-tissue.

Methods This diagnostic accuracy study was carried out in Indian tertiary care hospital. Children aged between 1 to 12 years and considered to be high risk for celiac disease (recurrent diarrhoea/chronic diarrhoea/or recurrent abdominal pain along with poor weight gain or abdominal distension/or moderate to severe iron deficiency anaemia/or short stature) were recruited. Those with chronic gastrointestinal diseases like inflammatory bowel disease or already diagnosed celiac disease were excluded. Eligible participants were screened for IgA anti tTG antibodies by 'celiac card' and ELISA based 'Euroimmun kit'. Patients screened positive by either of the two diagnostic methods underwent upper gastrointestinal endoscopy and biopsy and diagnosis of celiac disease made as per Marsh grading.

Results Sensitivity and specificity of 'Celiac card' were calculated in 250 enrolled children and found out to be 92.31% and 98.28% respectively, which was similar to the ELISA based 'Euroimmun' kit.