Clinical Hepatology

IDDF2019-ABS-0018 EVALUATION OF ANTI-CANCEROUS AND GENOTOXIC MECHANISMS VIA GENE EXPRESSION ANALYSIS OF VARIOUS EXTRACTS FROM THERMOPSIS TURCICA IN LIVER CANCEROUS CELL LINE

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Background The hepatocellular carcinoma is a devastating disease and it’s a fifth common cancer. It has increased from the last ten years and the third commonest cause of cancer-related death. Many species of Thermopsis have been used as a source of traditional oriental medicines. Its many species are endemic in different regions of the world, for example, Thermopsis turcica (T. Turcica) is endemic to turkey. The current study was designed to investigate the anticancerous and apoptotic mechanisms via gene expression analysis of various extracts from T. turcica in HepG2 cell line.

Methods Different doses of T. turcica extracts were used in MTT assay; cytotoxic and non-cytotoxic concentrations were used in comet test and qRT PCR to find the genotoxicity and gene expression analysis of apoptotic and repair genes.

Results In MTT cytotoxicity assay, Ethyl acetate extracts showed the highest cytotoxic effect, compared to other extracts. Methanol had more effect at a higher concentration compared to ethanol. Water and hexane had the least cytotoxic effects. Depending upon the MTT results, cytotoxic and non-cytotoxic doses were selected at 200 μg/ml and 50 μg/ml, respectively. Ethyl acetate showed the highest DNA damage (p<0.05) from the control group at 200 μg/ml concentration. Up regulation of the p53, p21, Cyclin D1, NFKB, TRAIL-R1 and TRAIL-R2 was observed, whereas, down-regulation was observed at 50 μg/ml concentration of all extracts. Caspase 3, 8 and 7 were also expressed at all doses of different extracts, except for the hexane and water, where they were down-regulated. DNA repair genes were up regulated except at the non-cytotoxic concentrations of hexane and at both concentrations of water extracts (figure 1).

Conclusions Various extracts of T. turcica, expressed the anticancerous activity in the HepG2 cells and Ethyl acetate extracts had the highest cytotoxic and genotoxic activity.

IDDF2019-ABS-0020 ACUTE CHOLESTATIC HEPATITIS INDUCED BY EBSTEIN-BARR VIRUS INFECTION IN AN ADULT

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Background Acute cholestatic hepatitis without features of infectious mononucleosis is a rare presentation of primary Epstein-Barr virus (EBV) infection, with only several cases previously reported in the medical literature.

Methods A 24 years old young man with a febrile illness was noted to have a cholestatic picture of deranged liver function tests. Over the following week, progressive obstructive jaundice developed, with no evidence of cholestocholitisiasis on ultrasound and magnetic resonance cholangiopancreatography. Serological tests for hepatitis A, B, C, E, cytomegalovirus (CMV), leptospirosis were negative. Specific immunoglobulin M antibodies against EBV were detected in his serum and the diagnosis of EBV associated hepatitis was confirmed by polymerase chain reaction testing.

Results Supportive treatment was implemented and his liver function had normalized 3 months after presentation.

Conclusions EBV is associated with a wide variety of clinical manifestations and can present as cholestatic hepatitis with or without features of infectious mononucleosis. While the diagnosis is often suggested by serological testing, EBV polymerase chain reaction is a new non-invasive laboratory study that can help identify infection in cases where the clinical presentation is atypical. Early investigation for EBV in febrile patients with deranged liver function tests and no demonstrable biliary obstruction on imaging can expedite both diagnosis and treatment, thereby avoiding costly or invasive procedures such as liver biopsy.

IDDF2019-ABS-0023 EUS-GUIDED VERSUS ERCP-GUIDED BILIARY DRAINAGE FOR PRIMARY PALLIATION OF MALIGNANT BILIARY OBSTRUCTION: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background Current evidence supporting the utility of endoscopic ultrasound-guided biliary drainage (EUS-BD) as a first-
line treatment option for malignant biliary obstruction (MBO) is limited. We conducted a meta-analysis to compare the performance of EUS-BD and endoscopic retrograde cholangiopancreatography-guided biliary drainage (ERCP-BD) as primary palliation of MBO.

Methods We searched several databases for comparative studies evaluating EUS-BD vs. ERCP-BD in primary drainage of MBO up to 30 November 2018. The primary outcome was treatment success. Secondary outcomes included adverse events, stent patency, stent dysfunction, reinterventions, procedure duration, and overall survival. Fixed- and random-effects models were used to calculate the pooled estimates.

Results Seven studies involving 445 patients were qualified for the final analysis (IDDF2019-ABS-0023 Figure 1). There was no difference in technical success (risk ratio [RR] 0.99; 95% confidence interval [95% CI]: 0.86–1.13), clinical success (RR 1.02; 95% CI: 0.94–1.12) and total adverse events (RR 0.82; 95% CI: 0.49–1.37) between the 2 procedures (IDDF2019-ABS-0023 Figure 2, 3). EUS-BD was associated with lower rates of post-procedure pancreatitis (RR 0.17; 95% CI: 0.05–0.53), stent dysfunction (RR 0.62; 95% CI: 0.40–0.97), and tumour in/overgrowth (RR 0.21; 95% CI: 0.07–0.69), but higher rates of post-procedure bleeding (RR 8.82; 95% CI: 1.08–72.21) and bile peritonitis (RR 4.84; 95% CI: 1.06–22.07). No differences were noted in reinterventions (RR 0.53; 95% CI: 0.22–1.25), procedure duration (weighted mean difference -2.11; 95% CI: -9.51–5.29), stent patency (hazard ratio [HR] 0.71; 95% CI: 0.45–1.11), and overall survival (HR 1.12; 95% CI: 0.80–1.58) (IDDF2019-ABS-0023 Figure 4, 5).

Conclusions EUS-BD showed similar efficacy, safety, stent patency, and overall survival when compared with ERCP-BD for primary palliation of MBO, whereas exhibiting several clinical advantages (lower risk of post-procedure pancreatitis, stent dysfunction, and tumour in/overgrowth) and disadvantages (higher risk of post-procedure bleeding and bile peritonitis). Large-scale, well-organized, head-to-head studies are warranted.