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Objective: The efficacy and safety of caplacizumab (CPLZ) for patients (pts) with immune-mediated thrombotic thrombocytopenic purpura (iTTP; also known as acquired TTP) were demonstrated in the Phase 3 HERCULES trial, with a 28-day follow-up period after end of treatment. Post-HERCULES (NCT02878603) evaluated the long-term outcomes of pts with iTTP treated with CPLZ during HER-CULES, and the safety and efficacy of repeated CPLZ use for iTTP recurrence. Methodology: Over 3 years' follow-up, pts could receive CPLZ with therapeutic plasma exchange (TPE) and immunosuppressive therapy (IST) for iTTP recurrence. Safety was assessed during the overall study period in the intention-to-observe (ITO) population; TTP-related events (TTP-related mortality, recurrence, or major thromboembolic events) were assessed in pts without recurrence in HERCULES or prior to post-HERCULES (efficacy ITO population). Safety and efficacy were also evaluated during recurrences. Results: Of 104 pts enrolled, incidences of adverse events (AEs) were similar between pts treated with CPLZ +TPE+IST during HERCULES (n=75) and pts treated with TPE +IST only (n=29). TTP-related events occurred in 4/49 pts (8%) randomized to CPLZ vs 11/29 pts (38%) randomized to placebo. The first recurrence episode was resolved/resolving for all 13 pts treated with CPLZ for recurrence, including 9 pts with repeat CPLZ. The safety profile of CPLZ for recurrence was consistent with HERCULES. Conclusion: Over long-term follow-up, the safety profile of patients treated with CPLZ in combination with TPE+IST was generally similar to those who received IST+TPE only, with no observed increases in iTTP recurrence. Repeat use of CPLZ was efficacious, with no new safety concerns.

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#### OTHER DISEASES

#### PP 16

## EFFICACY OF FUROSEMIDE IN METHOTREXATE CLEARANCE IN PATIENTS TREATED WITH HIGH DOSE METHOTREXATE

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Objective: Methotrexate was first used in 1947 as a chemotherapeutic drug in the treatment of acute lymphoblastic leukemia (ALL). Methotrexate has been extensively explored as an anticancer drug since that time. High dose methotrexate is a term used for doses above 1000mg/m2. The objective of this study is to determine efficacy of Furosemide in methotrexate clearance in patients treated with high dose methotrexate. Methodology: It was a prospective cohort study carried out at the Oncology department of a tertiary care hospital, Pakistan for a period of one year. Total 80 patients were enrolled and all received daily hydration of at least 5L along with urine alkalization with sodium-bicarbonate and calcium rescue as per protocol. All patients were given Furosemide 40 mg three times a day. Methotrexate levels were monitored every 24 hours to follow its clearance. Data analysis was done by using IBM SPSS version 24. Results: The mean (SD) hospital stay in the current study was 4  $(\pm 1)$  days. Frequency of delayed methotrexate clearance was observed in 16 (20%) patients. The mean (SD) time of methotrexate clearance was 4 ( $\pm$ 1) days. Renal injury was observed in 8 (10%) subjects, electrolyte imbalance in 12 (15%) subjects, and transaminitis in 11 (13.75%) subjects while mucositis was observed in 8 (10%) subjects. Conclusion: Our study concludes that furosemide is effective in methotrexate clearance in patients treated with high dose methotrexate. The use of furosemide reduces the cost and hospital stay. As furosemide is cheaper and easily available so it can be used easily in the methotrexate clearance.

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## PP17

# CART CELL THERAPY BLACK SHADOW IN HEMATOLOGICAL DISORDERS : SYSTEMIC REVIEW WITH META-ANALYSIS

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Aim: To determine the effect of CART therapy on hypogammaglobulinemia and bone marrow aplasia, and to determine the probable medications in management of hypogammaglobulinemia with other associated risk factors and complications. **Methodology:** Systematic search was conducted in 4 databases using the terms CART therapy, haematological malignancies, and hypogammaglobulinemia. Articles including patients with any haematological malignancies undergone CART therapy and assessment done on hypogammaglobulinemia were included. Following screening and selection of the articles, narrative synthesis, quality assessment, and meta-analysis were conducted Results: 1197 citations, 9 were finally included for meta-analysis comprising of 425 patients who were affected due to any haematological malignancies and had undergone CART therapy. The overall incidence rate was 35.35%. In all the studies, hypogammaglobulinemia was managed using IgG. Most of the patients across the studies had infection due to reduction in WBC count. The overall incidence of neutropenia following CART therapy was 59% lymphopenia was 82%, and B-cell aplasia was 49.5%. Conclusion: The effective way for management of hypogammaglobulinemia was using IgA antibody. The overall incidence of hypogammaglobulinemia and WBCs was difficult to conclude as majority of the studies were of low and fair quality and were collected at different time points after administration of CART therapy. Thus, good quality clinical trials, open label trials or RCT are required. Hypogammaglobulinemia increases with a decrease in neutrophils, lymphocytes, and B-type cells leading to variable infection.

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## PP18

## RECTAL CANCER DISTANCE TO THE ANAL VERGE AND THE T STAGING: MAGNETIC RESONANCE IMAGING FINDINGS

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Objective: This study sought to determine the magnetic resonance imaging (MRI) T staging and the rectal cancer (RC) distance to the anal verge in patients treated in radiotherapy department of Tripoli University Hospital. Methodology: An observational study was conducted in Radiotherapy department at Tripoli University Hospital retrospectively from January 1, 2018 to December 31, 2020 for total number of 73 patients whom met the inclusion criteria; 18-year- old or more, male and female with primary RC, T2 or more. distance metastasis or secondary RC were excluded. Results: Patients were 38 female and 35 male. Patient less than 50 years old was 25% and 38% was between 50-69 years old. patient at 70 years old or older was 10%. The low rectal cancer, less than 5 cm to the anal verge, is in 38.4% of the patients, with most of the patients at T2 staging (45.5%). While 19.2% was in the mid rectum, 5-10 cm to the anal verge, the T2 was 9%. Regarding the high rectum, more than 10 cm to the anal verge, it was

present in 42.5%, of which 45.5% was in T4b. **Conclusion:** Rectal cancer was less commonly in the mid rectum. in the low rectum it was commonly T2 stage and in high rectum T4b was predominant. Further studies are needed.

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#### PP19

# A CASE OF FASCIOLOSIS PRESENTING WITH SEVERE HYPEREOSINOPHILIA

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Objective: Fasciola hepatica is a parasitic ttrematode and infects livers of various mammals and rarely infects human liver. Frequently eosinophilia is detected in laboratory findings, but it is generally mild or moderate as with other parasitic infections. Here we present a patient with Fasciolosis as the cause of severe hypereosiphilia. Case report: A 66-yearold female patient presented with weight loss, nausea and abdominal pain for one month. Her physical examination was unremarkable except for mild hepatomegaly. Her laboratory tests were as follows; leukocytes 29900/mm3, eosinophils 21550/mm3 (%71.9), ALP 379 IU/L, LDH 278 IU/L, GGT 53 IU/L, CRP 30 mg/dl. All other etiological tests including primary secondary causes were negative. Abdominal MRI revealed focal patchy nodular lesions. Fasciola hepatica IHA (1/2560) was positive. Results: After the diagnosis, the patient was administered 2 doses of triclabendazole (10 mg/mg) at 5 day intervals. In the 3rd month of the treatment, the control eosinophil count decreased to 480/ mm<sup>3</sup>, and the patient was free of any symptoms. Conclusion: Severe eosinophilia (>5000/mm3) is generally associated with malignant diseases, hypereosinophilic syndrome or primary hematologic disorders. But it would be useful to consider fasciolosis in hypereosinophilia patients who are sheep and cattle breeder and present with gastrointestinal system complaints such as jaundice and abdominal pain.

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#### PP 20

## RITUXIMAB-INDUCED SEVERE ACUTE THROMBOCYTOPENIA IN A PATIENT WITH SPLENIC MARGINAL ZONE LYMPHOMA

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**Objective:** Rituximab, which is widely used in the treatment of B-cell lymphoma, is a chimeric monoclonal antibody directed against the CD20 antigen. Rituximab has many side effects, mainly allergic and neurological. Rituximab may cause thrombocytopenia in the long term after