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Hepcidin level changes in type 2 diabetes

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Objective: Background: Diabetes mellitus is a group of metabolic diseases characterized by hyperglycemia resulting from defects in insulin secretion or insulin action, or both. Diabetes and its complications have become a major public health problem in the world and its prevention has become a public health priority. Hepcidin, a 25-amino-acid antimicrobial peptide, is the central regulator of iron homeostasis. Under normal circumstances, hepcidin expression and subsequent release into plasma prevents further absorption of iron from the duodenal enterocytes by preventing the efflux of iron by ferroportin channels, hence reduced amounts of iron delivery via transferrin to hepatocytes. In response to iron loading, hepcidin expression increased to prevent the further uptake of iron. Conversely, during iron deficiency, hepcidin expression decreased. Aim of the Study: Was to assess the possible changes of serum hepcidin that may occur in patients with type 2 diabetes. Objectives: Was to evaluate changes of serum hepcidin level in type 2 diabetes, assess possible relationships of serum hepcidin, iron status, hepcidin: Ferritin ratio and HOMA-IR in type 2 diabetes patients.

Methodology: This study consisted of randomized eighty subjects divided into four groups: Group 1: Included 20 patients with impaired glucose tolerance (pre-diabetes), Group 2: Included 20 patients with controlled diabetes, Group 3: 20 patients with uncontrolled diabetes, Group 4: Included 20 healthy volunteers.

Results: : Hepcidin: Ferritin ratio was statistically high in impaired glucose tolerance and low in uncontrolled diabetes with (p -value $<0.001^*$) and normal in controlled diabetes and healthy volunteers. A significant negative correlation between hepcidin: ferritin ratio and HOMA-IR in impaired glucose tolerance with (p -value = 0.009^*) was found.

Conclusion: Serum hepcidin affected by multiple factors so cannot be used for screening of type 2 diabetes. But hepcidin: Ferritin ratio could be a novel marker for early screening of patients with type 2 diabetes.

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Chemotherapy delivering port-a-cath migration into the heart: a case report

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Objective: Chronically diseased patients who require long-term therapy through central venous access, a totally implanted central venous port systems are used. Such beneficial devices have life-threatening complications.

Case report: We report a 45-year-old Libyan female diagnosed with poorly differentiated gastric adenocarcinoma, underwent total gastrectomy with eso-jujunal anastomosis with port-a-cath placement to deliver chemotherapy. At the fourth cycle of chemotherapy, unfavourable event occurred; the catheter dislodged and migrated to the right cardiac chambers, which was successful removed by local anaesthesia with loop-snare technique via the right femoral vein.

Methodology: We report a 45-year-old Libyan female diagnosed with poorly differentiated gastric adenocarcinoma, underwent total gastrectomy with eso-jujunal anastomosis with port-a-cath placement to deliver chemotherapy. At the fourth cycle of chemotherapy, unfavourable event occurred; the catheter dislodged and migrated to the right cardiac chambers. The patient refused to reimplant Port-a-cath because of psychological trauma she has experienced, and to complement the chemotherapy cycles peripheral line was the option, which has health, social, and economical consequences.

Results: The port-a-cath was successful removed by local anaesthesia with loop-snare technique via the right femoral vein and the patient preference to complement the chemotherapy cycles through peripheral line after psychological trauma she experienced of the dislodgment and empolization of the port-a-cath.

Conclusion: Port-a-cath is beneficial devise has serious complications. To avoid dislodgment, displacement, and empolization developing of the port-a-cath is needed.

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PP 41

Reactive lymphocytes in blood film of a covid-19 iraqi patient: a case report

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Objective: Coronavirus disease 2019 (COVID-19) is a novel highly infectious disease with variable laboratory parameters changes. The disease is highly contagious and any delay in the diagnosis leads to an increased possibility of its spread. This study explores the use of blood film as a cheap, rapid and feasible laboratory test in the disease diagnosis. In low medical resources countries, this can be a crucial diagnostic method.

Case report: A 51-year-old Iraqi male had investigations done by Istishari Medical – private – Laboratory. He was diagnosed with COVID-19, of a moderate severity. The CBC showed normal hemoglobin of 15.71 g/dL (packed cell volume, PCV of 49.4%), WCC of $7.4 \times 10^9/L$, neutrophils of $5.3 \times 10^9/L$ (71.7%), lymphocytes of 1.0×10^9 (14.1%), monocytes and platelets count $125 \times 10^9/L$. Serum ferritin of 664.0 $\mu g/L$ (NR: 30.0–400.0), CRP of 59.0 mg/L (NR: <5.0) and D-Dimer of 0.27 mg/ml (NR: up to 0.5). The biochemical changes for the liver and renal functions expressed mild changes. Stained peripheral blood smear showed presence of many characteristic large atypical lymphocytes, constituting about 43% of the all lymphocytes (14.5% of the WCC). The most common subtype seen in the patient's blood film displayed a distinctive abundant pale blue cytoplasm, sometimes confined to its irregular margins which

indented by 'hug' the surrounding RBC. The nucleus exhibits loosely condensed chromatin with inconspicuous nucleoli. Less frequently, lymphoplasmacytoid lymphocyte was noticed in the stained blood smear. These cells showed ample pale blue unevenly stained cytoplasm with paranuclear of which contains eccentric nucleus with condensed chromatin.

Methodology: In this study, a peripheral blood smear of a COVID-19 patient was examined for the presence of abnormal leukocytes morphological changes.

Results: The blood film showed presence of atypical lymphocytes constituting about 43% of all lymphocytes (14.5% of the white cell count). This case report of COVID-19 patient represents an unusual feature of coronavirus family infections other than severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

Conclusion: This study shows that the presence of reactive lymphocytes in the patient's blood film can be a pivotal finding in the diagnosis of COVID-19. Additionally, it emphasized the importance of blood film examination as an essential hematological test for COVID-19.

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A study of hematological disease prevalence in covid-19 pandemic: a single center experience

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Objective: In the present study we aimed to investigate the prevalence of hematological conditions and patient characteristics among a patient population diagnosed with the COVID-19 infection at our hospital during the COVID-19 pandemic.

Methodology: Our study enrolled patients older than 18 years of age who were diagnosed with COVID-19 infection by physical examination and various studies and managed as inpatients at our hospital designated as a pandemic hospital within a two-month period between 15 March 2020 and 15 May 2020. The patients' age and sex distributions, contact status, comorbidities, primary hematological disorder, polymerase chain reaction (PCR) smear tests, computerized tomographic findings, need for intensive care, treatments regimens, total length of clinic stay, and rates of discharge and mortality were retrospectively reviewed.

Results: We reviewed the medical records of a total of 1928 patients who were admitted to pandemic clinics with the diagnosis of PCR-positive COVID-19 or suspected COVID-19 during the prespecified two-month period. Among these patients, 963 (49.9%) were male, and 965 (50.1%) were female. Their mean age was 51.3 ± 21.4 (min-max: 18-99) years. Eleven (0.57%) patients had a hematological condition and were thus consulted with the hematology department. They consisted of 3 females and 8 males with a mean age of 64.7 ± 18.7 (min-max: 22-89) years. A review of their diagnoses identified 4 patients with chronic lymphocytic leukemia (CLL),

2 patients with acute myeloid leukemia (AML), 1 patient myelodysplastic syndrome (MDS), 1 patient with non-Hodgkin lymphoma (NHL), 1 patient with chronic immune thrombocytopenia (ITP), 1 patient with polycythemia vera (PV), and 1 patient with thalassemia intermedia. While 4 patients had not taken any treatment for a hematological condition prior to the COVID-19 infection, 2 patients had taken azacitidine, 1 patient hydroxyurea, 1 patient chlorambucil, 1 patient R-FC (rituximab- fludarabine, cyclophosphamide), 1 patient R-Benda (rituximab-bendamustine), and 1 patient CHOP (Cyclophosphamide, Vincristine, Doxorubicin, Prednisolone). Three patients had a history of contact with COVID-19. While all patients had pulmonary involvement on a thoracic computerized tomography, three of them had mild involvement. Four patients needed intensive care. Seven (64%) patients had at least one comorbidity such as diabetes, hypertension, or coronary artery disease. All patients were treated with hydroxychloroquine, azithromycin, and enoxaparin. Four patients showing signs of disease progression were administered favipiravir while a patient received IVIG and another one received plasma therapy. The mean length of hospital stay was 12.7 days (min-max 2-27). Three of 11 patients died.

Conclusion: "COVID-19" and the "pandemic" it has caused, every detail of which we have still not understood, is a significant global problem from every aspects. Alongside of particularly the elderly, the patient group with hematological conditions that are immunosuppressed due to conditions themselves or their treatment regimens are at particular risk of infection by the COVID-19 pandemic. Our study have shown that the prevalence of hematological conditions is about 0.5% among patients infected by COVID-19. Patients with hematological conditions taking utmost care of isolation measures, protecting themselves, having strong family support, and being accustomed to the isolation process make a significant contribution to such a low prevalence.

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A case of malignant peritoneal mesothelioma as a rare cause of autoimmune haemolytic anaemia

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Objective: Nearly half of the cases of autoimmune haemolytic anaemia (AIHA) are associated with an underlying disorder that leads to immune dysregulation, and malignancies is one of them. Although AIHA is reported in patients with a wide range of haematological malignancies, most frequently in Chronic Lymphocytic Leukemia and Non-Hodgkin Lymphoma, only 1-2% are associated with solid organ malignancy. This case report highlights malignant peritoneal mesothelioma as a rare cause of autoimmune haemolytic anaemia.

Case report: We report a case of a twenty-nine year old female who initially presented to her general practitioner with a six month history of symptoms suggestive of irritable