



تقييم تعداد الدم الكامل لدى المرضى الذين يعانون من نزيف الجهاز الهضمي في

مستشفى بني وليد، بني وليد، ليبيا: دراسة أولية

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Evaluation of Complete Blood Count in Patients with Gastrointestinal Bleeding at Bani Waleed Hospital, Bani Waleed, Libya: A Preliminary Study

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الملخص:

أجريت هذه الدراسة لتقييم تعداد الدم الكامل لدى المرضى البالغين الذين يعانون من نزيف الجهاز الهضمي في مستشفى بني وليد، ليبيا. شملت الدراسة البالغين الليبيين الذين يعانون من نزيف الجهاز الهضمي، وشملوا 44 ذكراً و 21 أنثى، تتراوح أعمارهم بين 16 و 80 عاماً. تم علاج المرضى في مستشفى بني وليد خلال الفترة من يناير إلى مارس 2022. تم الحصول على الموافقة المُخطرة من جميع المشاركين (50 مريضاً و 15 من الضوابط)، تلا ذلك جمع 4 مل من الدم الوريدي من كل مشارك لتحليل تعداد الدم الكامل. كشفت النتائج عن اختلافات كبيرة ($p < 0.05$) مقارنة بمجموعة الضبط في العديد من معايير تعداد الدم الكامل. وقد تم تحديد أن مرضى نزيف الجهاز الهضمي معرضون لفقر الدم ونقص الأكسجين، بغض النظر عن الجنس والعمر، حيث يتأثر الذكور أكثر.

الكلمات الدالة: تعداد الدم الكامل، متلازمات الصفائح الدموية، النزيف المعوي.

Abstract:

This study was conducted to evaluate the complete blood count in adult patients presenting with gastrointestinal (GI) bleeding at Bani Waleed Hospital, Libya. The study included Libyan adults experiencing GI bleeding, comprising 44 males and 21 females, aged between 16 and 80 years. Patients were treated at Bani Waleed Hospital during January to March 2022. Notified consent was obtained from all participants (50 patients and 15 controls), followed by the collection of 4 ml of venous blood from each participant for CBC analysis. The findings revealed significant differences ($p < 0.05$) significant comparison to the control group in several CBC parameters. It was determined that GI bleeding patients are prone to anemia and hypoxia, irrespective of gender and age, with males being more often impacted.

Keywords: CBC, platelet syndromes, gastrointestinal bleeding

Introduction:

GI bleeding within the peptic tract manifests as an indication of underlying gastric disorders rather than being a standalone illness. The causes of bleeding can vary and are often associated with conditions that are manageable or curable. Identifying the source of bleeding is crucial as it can occur wherever from the mouth to the anus, ranging from subtle to severe and life-threatening. Initial treatment typically focuses on resuscitation, including intravenous fluid infusion and blood transfusion, along with proton pump inhibitors and, in some cases, vasopressin analogues and tranexamic acid. Diagnostic procedures such as upper endoscopy and colonoscopy are essential for identifying and treating the source of bleeding. Occult bleeding from the GI tract is a common cause of iron deficiency anemia in patients without an apparent source of blood loss. Disturbances in CBC parameters are regularly observed in affected role with GI bleeding, possibly due to underlying gastrointestinal diseases. This study aimed to elucidate the relationship between GI bleeding and CBC abnormalities.

Materials and Methods

65 adult GI bleeding patients were chosen at random. selected from Bani Waleed Hospital in Libya. Venous blood samples (4 ml) were collected from each participant and anticoagulated using EDTA. The Sysmex X21 automated machine was employed to analyze CBC components in accordance with the manufacturer's instructions.

Statistical Analysis

The means \pm SD were calculated and compared with the control group using the student's t-test for paired samples in SPSS version 11.5.

Results

The average age of the participants was 33 years, with 67.7% of them being male and 32.3% being female. Various symptoms were reported among the patients, including blood in vomit, black stool passage, history of bilharziasis, hepatomegaly, and splenomegaly. CBC parameters such as hemoglobin level, PCV, MCH, MCHC, and platelet count were significantly lower in patients compared to the control group, whereas the total WBC count was higher. The effects of GI bleeding on CBC parameters were found to be similar across genders.

Discussion

Bleeding leads to depletion of the body's energy sources and can be fatal if not promptly addressed. Assessment of blood status, including CBC, is essential in patients presenting with

bleeding, particularly occult blood loss. CBC parameters reflect various aspects of blood composition and can aid in diagnosing different types of anemia and identifying associated complications. In this study, patients with GI bleeding exhibited significant CBC abnormalities, indicating underlying complications such as decreased RBC function, inadequate oxygen supply, and anemia. Iron deficiency anemia was the predominant type observed. Thrombocytopenia was also prevalent among participants, suggesting a potential risk of microbial infections associated with GI bleeding.

Conclusion:

GI bleeding patients are susceptible to hypoxia, anemia, and other associated health issues. Additionally, GI bleeding can occur in people of any age or gender, albeit it seems to afflict men more frequently.

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