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A Case Report: A-70-Year-Old Woman with Hematemesis and Melena accompanied by Idiopathic Thrombocytopenia Purpura

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KEYWORDS
ITP, Hematemesis, Melena, Upper Gastrointestinal Bleeding

ABSTRACT
Upper gastrointestinal bleeding can manifest as hematemesis (bright red vomiting or coffee ground emesis). Upper gastrointestinal bleeding (UGIB) is defined as blood loss from a gastrointestinal source above the ligament of Treitz. Cases of gastrointestinal bleeding account for 150 inpatients per 100,000 population each year, with upper gastrointestinal bleeding 1.5-2 times more common than lower gastrointestinal bleeding. The incidence is higher in elderly patients and patients whom taking multiple medications or multi-pharmacy. If not treated properly, gastrointestinal bleeding can cause death. Idiopathic thrombocytopenic Purpura (ITP) is an autoimmune disease characterized by low platelet counts, purpura, and hemorrhagic episodes caused by antiplatelet autoantibodies. ITP cases most often occur in children with 85% not requiring treatment and young adults aged 20-50 years who are healthy within a few weeks of being infected with the virus. The problem is described using a descriptive case study method starting from history taking, physical examination, evaluation, diagnosis to the intervention management given to patients qualitatively. We reported a-70-year-old patient with Hematemesis and Melena accompanied by Idiopathic Thrombocytopenia Purpura. Then the patient was given treatment SF 2x1 tablet, Mersibion 2x1 tablet, Metformin 1x 500mg tablet. Parenteral treatment with Vit K 3x10, Omeprazole 1x40 mg injection, Ondansetron 2x8mg injection, Transamin 3x500 injectionz, NS 0.9% 500cc 6 hours/kolf.

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INTRODUCTION

Upper gastrointestinal bleeding can manifest as hematemesis (bright red vomiting or coffee ground emesis) and melena. Upper gastrointestinal bleeding (PSCA) or upper gastrointestinal bleeding (UGIB) is defined as blood loss from a gastrointestinal source above the ligament of Treitz. Patients may also present with symptoms secondary to blood loss, such as syncope, fatigue, and weakness (Irwandi & Harahap, 2022). Cases of gastrointestinal bleeding account for 150 inpatients per 100,000 population each year, with upper gastrointestinal bleeding 1.5-2 times more common than lower gastrointestinal bleeding. The incidence is higher in elderly patients and patients taking multiple medications or multi-pharmacy. If not treated properly, gastrointestinal bleeding can cause death.

Idiopathic thrombocytopenic Purpura (ITP) is an autoimmune disease characterized by low platelet counts, purpura, and hemorrhagic episodes caused by antiplatelet autoantibodies (Abidin & Mardiyantoro, 2020). ITP cases most often occur in children with 85% not requiring treatment and young adults aged 20-50 years who are healthy within a few weeks of being infected with the virus (Astuti & Ertiana, 2018). Idiopathic thrombocytopenic purpura (ITP) can cause complications in the form of bleeding into the brain which can be fatal although it is rare (Mochamad Dzikri Kevin, 2022).

This study aims to describe a case, namely a 70-year-old woman with Hematemesis and Melena accompanied by Idiopathic Purpura Thrombocytopenia starting from the history to the treatment given.

METHOD

Samples were taken from a 70-year-old woman with hematemesis and melena accompanied by ITP. The case is described using a descriptive case study method starting from history taking, physical examination, evaluation, diagnosis to intervention management given to patients qualitatively.

CASE PRESENTATION

A 70-year-old patient came to the Ciawi Regional Hospital with complaints of vomiting blood with a frequency of 2 times a day and black liquid defecation with a frequency of 6 times a day, since 5 days before hospital admission. Patients also complain of pain in the pit of the stomach that comes and goes.

The results of the physical examination showed that she appeared moderately ill, with blood pressure 140/90 mmHg, pulse rate 117x/minute, respiratory rate 22x/minute, SpO2: 97%. A general status examination was carried out, tenderness was found in the epigastrium (+) during abdominal palpation.

The results of the laboratory examination showed a decrease in hemoglobin 9,6 g/dL and platelets 83 x103/uL an increase in ESR, an increase in blood sugar, urea and chloride, then a re-examination was carried out, and a decrease in hemoglobin and platelets was still found (Irwandi & Harahap, 2022). The results of the chest x-ray examination showed cardiomegaly with suspicion of congestive pulmonum and bronchopneumonia with differential diagnosis pneumonia.

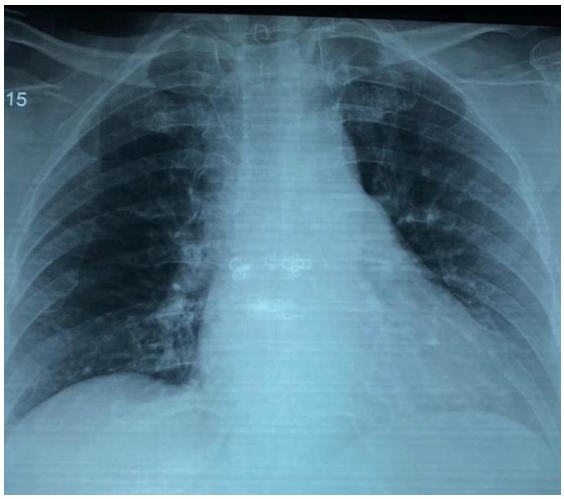

Figure 1 Thorax x-ray showed cardiomegaly with suspicion of congestive pulmonum accompanied by pneumonia

Peripheral blood morphology shows the impression of normochromic normocytic anemia, suggesting chronic disease anemia accompanied by blood loss and viral due to inflammatory processes. The patient was then diagnosed with Hematemesis and Melena accompanied by Idiopathic Thrombocytopenia Purpura (Nugraheni et al., 2023). Then the patient was given treatment in the form of SF 2x1 tablet, Mersibion 2x1 tablet, Metformin 1x 500mg tablet. Parenteral treatment with Vit K 3x10 injection, omeprazole 1x40 mg injection, Ondansetron 2x8mg injection, Transamin 3x500 injection, NS 0.9% 500cc 6 hours/kolf.

RESULTS AND DISCUSSION

Gastrointestinal bleeding can appear as real (overt) or hidden (occult) bleeding. Overt bleeding may be manifested by hematemesis, "coffee-ground emesis", melena or hematochezia (Irwandi & Harahap, 2022). Upper gastrointestinal bleeding is defined as blood loss from a gastrointestinal source above the ligament of Treitz, which is also known as the suspensory ligament of the duodenum. Upper gastrointestinal bleeding can manifest as hematemesis (vomiting of bright red blood mixed with stomach contents or coffee ground emesis) or melena (dark, black, tarry stools that usually have a strong characteristic odor caused by the activity of digestive enzymes and intestinal bacteria in the hemoglobin). Patients may also present with symptoms secondary to blood loss, such as syncope, fatigue, and weakness. This patient had hematemesis and melena which means there was an upper gastrointestinal bleeding that's occurring to this patient. She vomiting blood with a frequency of 2 times a day and black liquid defecation with a frequency of 6 times a day, since 5 days before hospital admission (Irwandi & Harahap, 2022).

Upper gastrointestinal bleeding occurs more often than lower gastrointestinal bleeding (Putra et al., 2019). Cases of upper gastrointestinal bleeding are estimated to account for 80-150 out of 100,000 people each year with a mortality rate of 2 -15%. Both incidence and mortality increase with age. Certain risk factors for bleeding are the use of aspirin and clopidogrel, a history of peptic ulcers and previous gastrointestinal bleeding (Togu et al., 2021). The most common causes of upper gastrointestinal bleeding in Indonesia are ruptured esophageal varices, peptic ulcers and erosive gastritis (Irwandi & Harahap, 2022). In this case, upper gastrointestinal bleeding occurred in an elderly person, a -70-year old woman (Unjani, 2016). The patient admitted that he had no history of taking certain drugs and no previous history of bleeding in the gastrointestinal tract (Kumara & Andriyati, 2023).

The two most common causes of Peptic Ulcer Disease (PUD) are use of nonsteroidal anti-inflammatory drugs (NSAIDs) and Helicobacter pylori infection, both of which can present with gastric or duodenal ulceration. If PSCA occurs due to NSAIDs, then treatment must be stopped (Jameson et al., 2018).

The clinical manifestations of PSC can vary from occult bleeding in the stool to melena, hematemesis to shock (LER, nd). Hematemesis (either fresh blood or coffee ground) indicates bleeding proximal to the ligament of Treitz. The presence of marked hematemesis indicates moderate-severe bleeding that may be ongoing, whereas coffee ground indicates more limited bleeding. Melena (black stool) indicates bleeding from the proximal ligament of Treitz and indicates bleeding that has been ongoing in the gastrointestinal tract for 14 hours, and for 3-5 days. The more proximal the bleeding site, the greater the likelihood that melena will occur (Mochamad Dzikri Kevin, 2022). Other manifestations of PSCA include increased bowel sounds and high blood urea nitrogen due to volume depletion and blood protein being absorbed in the small intestine (Kamboj et al., 2019; (Amin & Antunes, 2023). In this patient, there are complaints in the form of vomiting black blood with a frequency of 2x/day and black liquid defecation with a frequency of 6x/ days since 5 days. Patients also complain of pain in the pit of the stomach that comes and goes. The results of the physical examination showed moderate pain and tenderness in the epigastrium (+). The goal of the patient history is to identify risk factors that may point to the underlying etiology of PSCA. The patient admitted that he had no history of smoking, drinking alcohol or taking regular medication.

The physical examination should begin with an assessment of the patient's general condition and vital signs (Febrianto & Avoidati, 2021). Resting tachycardia is often the first sign of hypovolemia (associated with a loss of 15% of total blood volume). Additional signs and symptoms

such as hypotension (orthostatic then supine) associated with loss of 15-40% of total blood volume, tachypnea, decreased urinary intensity, and central nervous system symptoms (confusion and lethargy). A complete abdominal and rectal examination should be performed with assessment of bowel sounds, tenderness by palpation (suspect perforation or ischemia), rectal examination for the presence or absence of anal fissures, hemorrhoids, anorectal masses, and the presence or absence of melena. Severe PSCA is defined by evidence of hemodynamic compromise requiring aggressive volume resuscitation along with a decrease in hemoglobin level of at least 2 g/dL from baseline or a hemoglobin level of less than 8 g/dL, often requiring red blood cell transfusion (Jameson et al., 2018). In this case, It was found that the patient had tachycardia, the patient's pulse frequency was 117x/minute, regular and sufficient content. There is epigastric tenderness when palpating the abdomen.

Patients also need to do laboratory tests in the form of complete blood cell count, hemaglobin/hematocrit, liver function tests, lactate and coagulation studies (PT & aPTT). Hemoglobin laboratory examination should not be used as the sole predictor of bleeding severity because it can give false-positive results at the start of the examination (normal) even in cases of heavy bleeding. Acute PSCA is usually characterized by normocytic anemia, while chronic PCSA is usually characterized by microcytic anemia (Kamboj et al., 2019). In this patient, there was a decrease in hemoglobin, namely 9.6 g/dL and platelets, namely 78 x103/uL, an increase in ESR, namely 54 mm / hour, the increase in GDS was 425 mg/dL, Ureum 68.2 mg/dL and Chloride 111 mEq/L, then a re-examination was carried out, still a decrease in Hemoglobin and Platelets was found. The results of the chest x-ray examination showed there’s cardiomegaly with suspicion of congestive pulmonum and bronchopneumonia DD pneumonia.

Patients must be given oxygen and fast (NPO) (Purwoko et al., 2020). Intravenous fluids should be administered to maintain adequate blood pressure and hemodynamic stability. At least two intravenous accesses with large-gauge catheters (18G) should be established, ideally via the cubital vein. If the patient cannot maintain a patent airway or has ongoing severe hematemesis, endotracheal intubation may be considered. Early management of improved hemodynamics, hematocrit levels and cogulopathy with fluid resuscitation can reduce mortality (Custovic et al., 2020).

Proton pump inhibitors (PPI) are used to treat patients with non-variceal PSCA (Luthfiananda et al., 2023). Patients with significant bleeding should be treated with an 80 mg bolus of PPI followed by a continuous infusion of 8 mg/hour. The typical duration is 72 hours for patients with high-risk lesions visualized on endoscopy. If endoscopy is normal or reveals only low-risk lesions, the continuous PPI infusion can be stopped and reduced to twice daily or orally only (Sulis, 2022). Giving antibiotics (such as Ceftriaxone) to patients with suspected liver cirrhosis can reduce the risk of death and rebleeding. Blood transfusions should be given with a target hematocrit above 20%, and above 30% in high-risk patients, such as the elderly and patients with coronary artery disease (Kamboj et al., 2019). Endoscopy is the diagnostic modality of choice in PSCA (Kamboj et al., 2019. Twice-daily intravenous PPI therapy should be continued for 72 hours after endoscopic management of patients who have actively bleeding ulcers or high-risk stigmata of recurrent bleeding. If the patient has an ulcer with a low risk of re-bleeding, he can be switched to oral PPI once a day (Kamboj et al., 2019. Then the patient is given treatment in the form of SF 2x1 tab, Mersibion 2x1 tab, Metformin 1x 500mg. Parenteral treatment with Vit K 3x10, Omeprazole 1x40 mg, Ondansetron 2x8mg, Transamin 3x500 injection, NS 0.9% 500cc 6 hours/kolf. Along with the research by Jameson et al, this patient also got PPI which is omeprazole.

In PSCA the in-hospital mortality rate is approximately 10% based on observational studies (mortality rate from all causes approaches 37%). Mortality rates are higher in women than men when adjusted for age. Patients who have had multiple hospitalizations for gastrointestinal bleeding have a higher risk of mortality. Long-term prognosis is poorest in patients suffering from malignancy and bleeding varices. The prognosis is worse with increasing age. After 4 days of hospitalization, a follow-up was carried out with the patient and the patient's condition seemed to improve.

Idiopathic thrombocytopenic purpura (ITP) is an autoimmune disease characterized by low platelet counts, purpura, and hemorrhagic episodes caused by antiplatelet autoantibodies. Diagnosis is usually made by ruling out known causes of thrombocytopenia. ITP disease most often occurs in healthy children and young adults within a few weeks of viral infection and can be treated with immunosuppressive therapy. Identical forms of autoimmune thrombocytopenia may also be associated with chronic lymphocytic leukemia, lymphoma, SLE, infectious mononucleosis, and other bacterial and viral infections. Certain medications can also cause immune thrombocytopenia that is indistinguishable from ITP. In children, spontaneous remission occurs within a few weeks or months, so splenectomy is rarely necessary.

Idiopathic thrombocytopenic purpura can be divided into two classifications: acute form and chronic form. The acute form appears in childhood, affects both sexes, and may be preceded by a viral infection. While the chronic form affects individuals between the ages of 20-50 years and there is a female:male ratio = 3:1, and is usually not preceded by a viral infection and may present with bleeding episodes over months or years; during that time, the platelet count was near normal. This case occur in a 70-year-old-woman, probably due to the chronic disease that happened to this patient.

Drugs can also cause idiopathic thrombocytopenic purpura, such as acetazolamide, aspirin, aminosalicylic acid, carbamazepine, phenytoin, methyldopa, quinidine, rifampicin, and sulfamethazine. The history shows a history of drug use, viral infections, or immunization. It is more common in women and presents with petechiae, epistaxis, and menorrhagia. Occasionally, these clinical findings may be caused by HIV-related illnesses. In this patient, peripheral blood morphology examination was carried out, which showed the impression of normochromic normocytic anemia with thrombocytopenia. Anemic chronic disease accompanied by blood loss and viral due to inflammatory processes.

Laboratory tests showing a low platelet count, usually <40x109/L for more than three months. blood film: This shows large platelets and small platelet fragments, bone marrow examination: shows an increased number of megakaryocytes, platelet Coomb's Test: detects anti-platelet antibodies mounted on the patient's platelets, indirect test: uses a collection of normal donor platelets to detect free serum antibodies against platelets, usually anti-glycoprotein IIb/IIIa antibodies, various other tests can be used to detect anti-platelet antibodies, including activation of lymphocytes by autologous platelets, activation of lymphocytes by antibody-platelet immune complexes, phagocytosis of platelet-associated IgG by competitive binding assays, tests radiolabeled Coombs antiglobulin, fluorescein-labeled Coombs antiglobulin test, and ELISA, testing for systemic lupus erythematosus (with ITP): Antinuclear antibodies (ANA) can be performed using indirect immunofluorescence. Most SLE cases show positive ANA results. We found the platelets 83 x103/uL on this patient which is very low.

In adult patients with ITP, the corticosteroid that can be given is prednisone 1-2 mg/kg/day. Patients who do not respond adequately and experience active bleeding after one month of treatment with corticosteroids may require splenectomy after using intravenous immunoglobulin to increase the platelet count. Therefore, splenectomy is the treatment of choice for adult patients with ITP who have persistent symptomatic thrombocytopenia. In adult patients who do not respond to splenectomy, the

drug Vincristine can be given. In HIV individuals with ITP, the use of the drug Zidovudine is effective in increasing platelet counts.

CONCLUSION

Upper gastrointestinal bleeding can manifest as hematemesis (bright red vomiting or coffee ground emesis) and melena. Upper gastrointestinal bleeding (PSCA) is defined as blood loss from a gastrointestinal source above the ligament of Treitz. A-70-year old patient came with complaints of vomiting blood with a frequency of 2x/day and black liquid defecation with a frequency of 6x/day since 5 days of SMRS. Patients also complain of pain in the pit of the stomach that comes and goes.

The results of the physical examination showed moderate pain and tenderness in the epigastrium (+). The results of the laboratory examination showed a decrease in hemoglobin and platelets, an increase in ESR, an increase in GDS, urea and chloride, then a re-examination was carried out, and a decrease in hemoglobin and platelets was still found. The results of the chest x-ray examination showed the impression of cardiomegaly with suspicion of congestive pulmonum and bronchopneumonia DD pneumonia. Peripheral blood morphology shows the impression of normochromic normocytic anemia, suggesting chronic disease anemia accompanied by blood loss and viral due to inflammatory processes. The patient's two main symptoms, namely vomiting blood and black liquid defecation, indicate that bleeding has most likely occurred in the upper gastrointestinal tract.

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