ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 14, Issue, 09, pp.22251-22252, September, 2022
DOI: https://doi.org/10.24941/ijcr.43945.09.2022

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

REVIEW ARTICLE

DENTAL CONSIDERATION AND DIFFERENT APPROACHES WHEN DEALING WITH PATIENTS WITH GI BLEEDING IN DENTAL OFFICE: WHAT SHOULD YOU EXPECT AS A DENTIST?

Abdulaziz Abdullah Alabood[1,*], Bader Fatani[1] and Dr. Sara Al Shehri[2]

College of Dentistry, King Saud University, Riyadh, Saudi Arabia[1]
Department of Internal Medicine, King Saud University Medical City, Riyadh, Saudi Arabia[2]

ARTICLE INFO

Article History:
Received 09th June, 2022
Received in revised form
27th July, 2022
Accepted 19th August, 2022
Published online 28th September, 2022

Key words:

GI bleeding, Management, Complication, Dental, Dentistry.

**Corresponding Author:*
Abdulaziz Abdullah Alabood

ABSTRACT

Gastrointestinal bleedingis all forms of bleeding in the gastrointestinal tract, these includes any bleeding from the mouth to the rectum. Gastrointestinal bleeding can be classified into upper gastrointestinal (GI) bleeding which is defined as any hemorrhage from the mouth to the ligament of Treitz. Lower gastrointestinal (GI) bleeding is defined as any hemorrhage from the ligament of Treitz to the rectum. Dental consideration and proper management of patients with GI bleeding are an important part of clinical dentistry. This study aims to review dental consideration and different approaches when dealing with patients with GI bleeding in dental office.

Citation: ***Abdulaziz Abdullah Alabood, Bader Fatani and Dr. Sara Al Shehri.*** **2022.** "Dental consideration and different approaches when dealing with patients with GI bleeding in dental office: What should you expect as a dentist?*".* *International Journal of Current Research*, 14, (09), 22251-22252.

INTRODUCTION

Gastrointestinal bleeding or also called gastrointestinal hemorrhage (GIB) is all forms of bleeding in the gastrointestinal tract, these includes any bleeding from the mouth to the rectum and can be classified into upper gastrointestinal (GI) bleeding which is defined as any hemorrhage from the mouth to the ligament of Treitz and it's estimated by 70-80% of all cases of GI bleeding. Lower gastrointestinal (GI) bleeding is defined as any hemorrhage from the ligament of Treitz to the rectum. Acute overt lower gastrointestinal bleeding (LGIB) accounts for approximately 20% of all cases of GI bleeding, these usually leads to a hospital admission which needs an invasive diagnostic evaluation. Most of the patients with acute LGIB usually stop bleeding spontaneously and have a favorable outcome (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010). The incidence of gastrointestinal manifestations has also been reported in covid-19 patients from a range of 3% to 61% (Negro, 2022). This study aims to review dental consideration and different approaches when dealing with patients with GI bleeding in dental office.

Risk factors and Signs and symptoms: Risk factors of GI bleeding includes prior GI bleeding, anticoagulant use, high doses of nonsteroidal anti-inflammatory drug use, older age, and H-pylori infection.

The main causes of upper GI bleeding are mainly peptic ulcer disease, gastritis,erosive esophagitis, AVM, variceal bleeding, Mallory-Weiss syndrome, and cancer of upper GI tract. In other hand, the main causes of lower gastrointestinal (GI) bleeding are diverticulosis, hemorrhoids, carcinoma, post polypectomy bleeding, angiodysplasia, infection, ulceration upper GI source, and ischemic colitis. Signs and symptoms of upper GI bleeding may include abdominal pain, dizziness, syncope,anemia, hematemesis, and melena.Signs and symptoms of lower GI bleeding includes diarrhea, anemia, and hematochezia (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010).

Investigation: Physical examination is an important aspect of diagnosis of GI bleeding which includes evaluation of hemodynamic stability, abdominal pain presence or rebound tenderness, and checking color of stool. Laboratory testsinclude a full complete blood count, prothrombin time,routine chemistry metabolic panel, coagulation and platelet count, albumin tests, blood type and crossmatch, and ratio of blood urea nitrogen to creatinine (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010).

Management of upper GI bleeding: Upper GI bleeding is a common emergency which can cause a significant morbidity and mortality (Yang, 2022). However, the occurrence of this condition has been decreasing annually (Barkun, 2019). It is one of the main reasons for hospital admission especially in adult (Costable, 2021).

Upper GI bleeding may present as hematemesis or melena. However, it can also present as hematochezia if brisk bleeding was encountered (Kamboj, 2019). Clinical prediction guides (e.g., Glasgow-Blatchford bleeding score) are important for evaluation of upper GI bleeding risk and therapy. A normal saline bolus solution should be rapidly infused to correct hypovolemia and to keep blood pressure at normal range. If hemoglobin is less than 7 g per dL, the blood should be transfused to the patient. If patients showed instable hemodynamic and signs of upper GI bleeding are present, starting of endoscopy immediatelyshould be done within 24 hours of presentation. One of common strategy in case of failed endoscopic hemostasis is to attempt transcatheter arterial embolization, then prepare for surgery if hemostasis is not effective or successful. Proton pump inhibitors drugs should be delivered to patients once presentation with upper GI bleeding. According to the guideline, the high-dose proton pump inhibitor treatment for the first 72 hours post-endoscopy because this is when rebleeding risk is highest recommend (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010).

Management of lower GI bleeding: Lower GI bleedingtreatment is not as same as in the treatment of upper GI bleeding (Xiao, 2022). Colonoscopy is prepared as a diagnostic tool and should be the initial diagnostic procedure for nearly all patients presenting with acute LGIB once the patient is hemodynamically stable. Endoscopic hemostasis therapy should be provided to patients with high-risk endoscopic stigmata of bleeding such as in active bleeding (spurting, oozing), non-bleeding visible vessel, or adherent clot. The endoscopic hemostasis modality used are mechanical, thermal, injection, or combination.

Repeat colonoscopy with endoscopic hemostasis should be considered for patients with evidence of recurrent bleeding. Strategies to prevent recurrent bleeding should be considered. If the patient currently or had a history of acute GI bleeding the NSAID (non-steroid anti-inflammatory drug) should be avoided, especially if secondary to diverticulosis or Angio ectasia. If patients with high-risk cardiovascular disease, you should not stop aspirin therapy (secondary prophylaxis) in the setting of lower GI bleeding (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010).

Dental considerations: Many important dental considerations are presented in the literature these includes the following (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010):

- NSAID should be avoided for patients with GI bleeding.
- Antiplatelet and anticoagulation should be avoided.
- Patient who shows hemodynamic instability, active bleeding or Hm <7g should be referred to ICU and delay any selective treatment until the patient is stable.
- Oral hygiene can decrease the risk of H. Pyloriinfection that can be transmitted to GI and cause recurrent GI infection and bleeding
- SSRI medication such as antidepressant can increase GI bleeding.

CONCLUSION

Precise medical history, physical examination, and laboratory test should be taken to any patient presented to your clinic in order to determine the severity of bleeding and to locate the location and etiology of the bleeding. Initial patient evaluation of hemodynamic stability should be performed. If patient is hemodynamic instable or hemoglobin is less than 7 g dL, the patient should be referred for ICU for further treatment for blood transfusion. NSAID, ani-platelet, anti-coagulation should be avoided. Risk assessment and stratification should be performed to help distinguish patients at high and low risk of adverse outcomes and assist in patient triage including timing of colonoscopy and level of care (Strate, 2016; Al-Zahrani, 2021; Wilkins, 2020; Andrade *et al*. 2010).

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