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LETTER TO THE EDITOR

INDICATIONS OF EMERGENCY ENDOSCOPY

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Abstract

Emergency endoscopy is a life-saving procedure of tremendous importance. It is a long-standing minimal invasive technique utilized for diagnosis and treatment of gastrointestinal tract diseases. Endoscopy is the most precise and practical method for diagnosing the source of upper gastrointestinal bleeding, grading the lesions induced by ingested caustic substances or removing foreign bodies from the esophagus or the stomach. Controversy exists regarding the timing of endoscopy, defined by the period of time between the patient presentation and performing the endoscopy. Hypothetically, an early endoscopy (generally defined as within 24 hours from presentation) compared with routine endoscopy may translate into an improved patient outcome, because early hemostasis should reduce the quantity of blood loss. Also, there are reasons for worse outcomes with urgent endoscopy: absence of back-up support available at the time of endoscopy (surgery or radiology), emergency endoscopy may be associated with insufficient resuscitation. Regarding caustic ingestions, most authors suggest a delay of only 12 hours and a total wait of no more than 24 hours after ingestion for early assessment and treatment. Endoscopy past 48 hours is discouraged because of progressive wall weakening and increased risk of perforation. Sharp esophageal foreign bodies or complete obstruction of the esophagus should prompt an endoscopy within 2 hours from patient's presentation.

Résumé

Indications pour l'endoscopie d'urgence

L'endoscopie d'urgence est un procédé vital d'une importance majeure. C'est une technique invasive minimale de longue date utilisée pour le diagnostic et le traitement des maladies du tractus gastro-intestinal. L'endoscopie est la méthode la plus précise et la plus pratique pour diagnostiquer la source de saignement gastro-intestinal supérieur, classer les lésions induites par les substances caustiques ingérées ou éliminer les corps étrangers de l'œsophage ou de l'estomac. Il existe une controverse concernant le moment de l'endoscopie, défini par la période de temps entre la présentation du patient et la réalisation de l'endoscopie. Hypothétiquement, une endoscopie précoce (généralement définie comme celle effectuée dans les 24 heures suivant la présentation) par rapport à l'endoscopie de routine peut se traduire par un meilleur résultat pour le patient, car l'hémostase précoce devrait réduire la quantité de perte de sang. De même, il existe des raisons d'aggraver l'issue d'une endoscopie urgente: l'absence de soutien de secours disponible au moment de l'endoscopie (chirurgie ou radiologie), l'endoscopie d'urgence peut être associée à une insuffisance de la réanimation. En ce qui concerne les ingestions caustiques, la plupart des auteurs suggèrent un délai de seulement 12 heures et une attente totale de 24 heures tout au plus après l'ingestion pour une évaluation et un traitement

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In acute purulent cholangitis, timely performed endoscopic retrograde cholangiopancreatography is a reliable option with increased diagnostic and therapeutic effectiveness and decreased morbidity and mortality rates.

Keywords: emergency, digestive endoscopy, indications.

précoces. L'endoscopie dépassant les 48 dernières heures est déconseillée en raison de l'affaiblissement progressif des parois et de l'augmentation du risque de perforation. Des corps étrangers affilés ou une obstruction complète de l'œsophage devraient provoquer une endoscopie dans les deux heures suivant la présentation du patient. Dans la cholangite aiguë purulente, la cholangiopancréatographie endoscopique rétrograde réalisée en temps opportun est une option fiable avec une efficacité diagnostique et thérapeutique accrue et une diminution des taux de morbidité et de mortalité.

Mots-clés: urgence, endoscopie digestive, indications.

Introduction

Emergency endoscopy is a long-standing minimal invasive technique utilized for diagnosis and treatment of gastrointestinal tract diseases and is a life-saving procedure of tremendous importance. Furthermore, it is a precise and a practical tool for viewing the source of upper gastrointestinal bleeding, grading the lesions induced by ingested caustic substances or removing foreign bodies from the esophagus or the stomach. Controversy exists regarding the timing of endoscopy defined as the period of time between the patient's presentation and the performance of the endoscopy.

For an endoscopy to be performed effectively in emergency, a team of physicians has to be engaged: emergency physician, anesthesiologist and endoscopist. The need to perform the emergency endoscopy is debatable. There is still to be defined the time between the patient's presentation and the emergency procedure. Most studies propose a time span of 24 h as the emergency time, while some of them define a period of 72 h (especially in cases of acute pancreatitis)[1].

Five main indications are established for emergency endoscopy:

1. a). Gastrointestinal bleeding without portal hypertension

Even in case of active hemorrhage, the endoscopy should not be carried out in a rush – without waiting for resuscitation and gastric emptying – as it can be ineffective or even dangerous.

In a retrospective study on 502 patients with gastrointestinal bleeding (375 patients with a non-variceal cause of bleeding, 10% variceal), Sarin et al (2009) evaluated the different outcomes associated with the timing of endoscopy. Performing the endoscopy in less than 6 hours (early) after patient's presentation vs. 6-24 hrs vs. >24 hrs showed: no difference in length of hospitalization, no difference in need of surgical intervention, no difference in blood transfusion requirements and no difference in mortality. Patients were 3.6 times more likely to require surgery or die if endoscopy was done early (within 6 hours) compared to >24 hours. Time to endoscopy was not associated with better outcomes and most patients could be effectively managed within 24 hours[2].

In a patient with gastrointestinal bleeding, using the nasogastric tube has a minimal diagnostic and prognostic value and does not alter therapeutic decision. As such, 50% of duodenal lesion bleedings have a false negative aspirate; 15% of the patients with clear or bile aspirate have high risk lesions[3].

An upper digestive endoscopy should be performed in less than 12 hours in case of hemodynamic instability that persists despite resuscitation, the occurrence of gastrointestinal bleeding or the presence of blood in the nasogastric tube during hospitalization, or a contraindication for the interruption of anticoagulants[4].

To support the clinical decision, it is possible to rely on the definition of the Rockall score which identifies patients at risk of adverse outcome following acute upper gastrointestinal bleeding (≥5 especially in cases of chronic renal failure) or the Glasgow-Blatchford score (≥12, which takes into account urea, hemoglobin, systolic blood pressure and clinical markers)[5].

In case of minor bleeding (Rockall <3, Glasgow¨-Blatchford <5), performing an endoscopy within 24 hours reduces the length of hospital stay[5]. When the risk is very low, it is possible to let the patient go home by planning a return in the following days and informing on the need to hospitalize in case of recurrence[5].

Contraindications – that nevertheless should be discussed on a case-by-case basis – with emergency endoscopy remain limited: suspicion of associated perforation, acute coronary artery disease associated or induced, anticoagulant overdose.

In the specific case of gastrointestinal bleeding associated with anticoagulant overdose, the clinician is faced with the decision to stop the anticoagulation with thromboembolic consequences deriving from it or to continue the anticoagulation with the risk of exsanguination. Upper gastrointestinal endoscopy with endoscopic hemostasis is very effective even in patients with a moderately increased INR; INR normalization did not reduce the risk of rebleeding and only delayed endoscopic intervention. In case of massive bleeding, an INR less than 2.5 is considered reasonable for practicing emergency hemostasis within safety limits[6].

The main point to have in mind is that even in case of active hemorrhage, digestive endoscopies should not be performed in a hurry. The optimal timing for emergency endoscopy in the onset of a gastrointestinal bleeding has not been sufficiently studied; for massive bleeding earlier intervention should bring a better outcome, in all others endoscopy within 24 hours is sufficient[2].

1.b). Gastrointestinal bleeding associated with portal hypertension

Urgent endoscopy followed by ligation has proved its impact on the recurrence rate of bleeding and mortality in case of portal hypertension. There remains the question of the exact time that is less than 12 hours or less than 24 hours according to the various international recommendations[7].

2). Caustic ingestion

In the case of caustic ingestion, an endoscopy can confirm the significant ingestion of caustics, establish a prognosis and define a treatment. The indication is made on a case-by-case basis, taking into account the nature and volume of the ingested caustic, the symptoms and the presence of ENT lesions.

The gesture should ideally be performed within 12 to 48 hours after ingestion, and in the absence of radiological evidence in favor of digestive perforation (lateral neck films, chest and abdominal X-ray should be obtained before the endoscopy)[8].

3). Ingesting foreign bodies

Only the ingestion of a disk battery, sharp objects or the existence of a complete obstruction of the esophagus requires emergency endoscopy within 2 hours[9].

The procedure is indicated within 24 hours if a blunt object is stuck in the esophagus, if there is incomplete obstruction of the esophagus, or in the case of objects more than 6 cm in length in the duodenum or of magnetic objects in the duodenum or upstream. For parts or objects larger than 2.5 cm in the stomach, the button cells or cylindrical cells that remain in the stomach 48 hours after ingestion, an endoscopic gesture is necessary without urgency[9].

These recommendations are limited because the vast majority of foreign bodies present in the stomach are eliminated within 4 to 6 days after ingestion by natural routes. Emergency endoscopy may obviate the need for surgery in foreign body ingestion.

4). Acute cholangitis / acute biliary pancreatitis

Endoscopic retrograde cholangiopancreatography (ERCP)is indicated in less than 12 hours in case of severe cholangitis that does not respond to resuscitation and the use of antibiotics. A delay of 24 hours is tolerated in cases of severe acute biliary pancreatitis[10].

In the presence of pancreatitis associated with cholangitis, a therapeutic gesture is necessary within 24 hours. In the absence of associated cholangitis, the delay can be postponed to 72 hours.

5). Exsufflation of the colon

The treatment of acute colonic pseudo-obstruction by exsufflation is recommended in case of failure of medical treatment or contraindication to this treatment. The decision must be made on a case by case basis. The only objective elements that guide the gastroenterologist are the diameter of the cecum (greater than 12 cm) and the duration of the pseudo-obstruction (more than 6 days)[11].

Conclusions

In the case of upper gastrointestinal bleeding, an endoscopy should be performed within 24 hours. In variceal bleeding or suspected ongoing active bleeding, the delay should be shortened to a maximum of 12 hours. Consider emergent upper endoscopy and then colonoscopy with rapid preparation lower gastrointestinal bleeding[12,13]. The indications for emergent endoscopy with foreign body ingestion have to be promptly recognized: complete esophageal obstruction, sharp objects and button batteries in the esophagus. For patients with acute cholangitis, emergent endoscopic retrograde cholangiopancreatography is a therapeutic method with increased effectiveness and decreased morbidity and mortality rates.

Compliance with Ethics Requirements:

„The authors declare no conflict of interest regarding this article"

„The authors declare that all the procedures and experiments of this study respect the ethical standards in the Helsinki Declaration of 1975, as revised in 2008(5), as well as the national law."

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