Acute Upper Gastrointestinal Hemorrhage
“Surgical Perspective”

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Introduction:

- AGH is a leading cause of admissions into ICU.
- Overall mortality 5-12%, but increases to 40% with recurrent/persistent hemorrhage.
- 85% of cases bleeding will stop spontaneously. 15% will need aggressive management and diagnosis. Surgery is most likely in these high risk patients.
- 50% of patients will be older than 60 years. Patients that are less likely to tolerate repeated bleeding episodes gain more by early surgical intervention, although they are the patients most at risk because of surgery.
- Only 5% of admissions will eventually require surgical control bleeding.
Initial Evaluation and Treatment:  
Goal 1: Patient assessment

**History and Physical Examination:**
- Character of bleeding: hematemesis vs. melena vs. hematochezia vs. occult.
- Hematemesis is diagnostic of UGIT bleeding (nose, pharynx, hemoptise.)
- Melena upper (or lower GIT). Dark tarry stool, bad smell.
- Hematochezia is bright red blood passed anally and usually represents colonic bleeding, but 10% of patients may have rapid UGIT bleeding. Represents at least 1000ml of blood loss. Surgery more likely in such patients.
Patient assessment:

Associated Symptoms:
- Dizziness and syncope indicates profound blood loss.
- Previous upper abdominal pain—peptic ulcer disease.
- History of vomiting may suggest Mallory-Weiss tear.
- Weight loss, ? Malignancy.

Medications:
- NSAIDS
- Warfarin
- B-blockers, antihypertensives.
Patient assessment:

Past Medical History:
- Full history of dysphagia or reflux.
- Vomiting, liver disease, alcohol, IBD
- Co-morbid medical conditions e.g. Cardiovascular disease, renal failure.

Physical Examination:
- Major focus is to determine the degree of blood loss.
- Patients in shock (BP<90mmHg systolic), cold and clammy and tachycardia = 20-40% blood loss.
- Nose and pharynx
- Jaundice
- Rectal examination.

Laboratory Assessment:
- SMAC and FBC
- HB<10 = severe bleeding.
GOAL 2: Resuscitation

- Intravenous line.
- Urine catheter.
- Coagulation defects.
- Best done in ICU.

GOAL 3: Identification of bleeding:

- Patients need emergency gastroscopy. Within 12 hours for the stable patient.
- Nasogastric tube will reveal either; **blood**- diagnosis of UGIT bleeding confirmed ; **Bile stained fluid** - UGIT bleeding unlikely ; **Nothing**- does not help much.
Endoscopic findings:

Importance of appearance of the ulcer:

- Forrest Classification
- Ulcers either have a clean base (rarely bleeds), a flat pigmented spot (10% rebleeding risk), an adherent clot (20%), a visible vessel (40-80% risk of rebleeding).
Surgical Therapy:

- For the surgeon methods to prevent surgery is an advance, but alternatives must be comparable in terms of morbidity and mortality.
- Surgery is indicated in patients with active hemorrhage not responsive to endoscopic measures, significant hemorrhage after previous endoscopic control, ongoing transfusion requirements, or more than 6 units required during resuscitation.
- There are reports that early surgery may benefit patients with high risk ulcers (F1 and F2) but this was mainly before improved success with endoscopic methods.
- Clinical judgment is essential in determining who will benefit from early surgery and will depend on technical expertise available.
Choice of operation:

- Goal of treatment is control of hemorrhage. The role of acid reducing procedures are secondary.

Bleeding duodenal ulcer:

- Direct exposure of the ulcer by means of a duodenotomy. Typically they are situated in the posterior wall which makes simple ligation feasible (four quadrant ligation).

- In the stable patient a definitive antisecretory procedure is indicated. Truncal vagotomy and drainage procedure, but as previously mentioned these patients are usually unstable and there must be guarded against long procedures in old sick patients.

- Up to 10% of patients may develop rebleeding but is seldom significant. Mortality from 1-50%.
Choice of operation:

**Bleeding gastric Ulcer:**
- Again stop bleeding.
- Unlike duodenal ulcer there is a chance that gastric ulcers may be malignant. Up to 10% may be malignant ulcers.
- Additionally rebleeding rates for gastric ulcers may be as high as 30%.
- Therefore ideally, the surgical procedure should include ulcer excision. Fortunately most bleeding ulcers are situated in the stomach in such a position as to allow easy surgical excision.

**Ulcer Surgery in Patients with HP infection:**
- The role of definitive surgery is being questioned.
- Only 10% of patients infected with HP develop ulcer disease. Of that 20% will develop bleeding as a complication. Of them only 10% will require surgery, thus 0.2%
Surgery for bleeding Esophageal Varices:

- There has been a move away from surgery. The advent of effective endoscopic treatment has been the reason for this.
- Porto systemic shunt procedures prevent rebleeding by lowering portal pressures.
- The main problem is the high incidence of post shunt encephalopathy. Therefore shunts only for patients with good liver function (Child a,b).
- Selective VS Non-selective shunts.
- TIPS to lower portal pressure by means of transjugular intrahepatic Porto systemic shunt.