Update on Endoscopic Treatment of Non-Variceal Upper GI Bleeding

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Disclosure of Conflicts of Interest
I herewith declare the following paid or unpaid consultancies, business interests or sources of honoraria payments in the period since April 1, 2016, and anything else which could potentially be viewed as a conflict of interest:

Astra-Zeneca Speaker
Boston Scientific Consultant
Endo-Aid Consultant
GI View Consultant
Intec Pharma DSMB Member
Motus GI Consultant, MAB
Taro Pharma Speaker
Symbionix / 3D Systems Consultant

BSG. UK Comparative Audit 2007. www.bsg.org.uk

1. Pre-Endoscopy Management

2. Endoscopic Management

3. Post-Endoscopy Management

Timing of Endoscopy

Early endoscopy (within 24 hours of patient presentation) recommended for most patients with acute UGIB

- Endoscopy after hemodynamic resuscitation
- No good evidence for "immediate" endoscopy (≤ 2hrs)

More urgent endoscopy required (within 12 hours)

- ongoing unstable hemodynamics
- persisting hematemesis
- GBS >12

Endoscopic Management

Optimal Hemostasis
What? When? How?

Ulcers with High Risk Endoscopic Stigmata Should Receive Endoscopic Therapy

<table>
<thead>
<tr>
<th>Spurting / Oozing Vessel</th>
<th>Non Bleeding Visible Vessel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forrest Ia &amp; Ib</td>
<td>Forrest IIa</td>
</tr>
</tbody>
</table>

Why treat the high risk lesions?

Table 2. Stigmata of recent hemorrhage in descending order from highest risk to lowest risk for further bleeding:

<table>
<thead>
<tr>
<th>Stigmata</th>
<th>Further Healing Average (%)</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spurting Hemorrhage</td>
<td>80</td>
<td>9</td>
</tr>
<tr>
<td>Nonbleeding visible vessel</td>
<td>44</td>
<td>12</td>
</tr>
<tr>
<td>Active oozing</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Flat pigmented spot</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Clean-based ulcer</td>
<td>3</td>
<td>55</td>
</tr>
</tbody>
</table>

Why treat the high risk lesions? 

+hemostasis  +hemostasis  ???  No hemostasis  No hemostasis
Combination Hemostasis Therapy
Forrest Ia and Ib (spurting, oozing)

Dilute epinephrine 1:10,000

Mechanical Methods (Clips)
- Through-the-scope (TTS) and over-the-scope (OTS) clips are available
- Hemostasis is achieved by compressing the blood flow
- Clips are more efficient in achieving durable hemostasis than injection therapy alone

Forrest Ila (non-bleeding Visible Vessel)
What to do with an adherent clot, Forrest IIb?

Clot removal + hemostasis most beneficial
1. Older age
2. Co-morbidities
3. In-hospital bleed

Gralnek et al. Endoscopy 2015
REMINDER!
Epinephrine alone is inadequate as definitive hemostasis treatment!

WARNING

Emerging Hemostasis Modalities

Topical sprays / powders
- Hemospray
- Endoclot
- Ankaferd blood stopper

In PUB = rescue therapies

Thermal
- Coag grasper
Hemospray in Forrest Ia / Ib bleeding

- Use only in active bleeding
- Turn off suction
- Push catheter out to avoid “blow back” of powder

Hemospray Application in Nonvariceal Upper Gastrointestinal Bleeding

Results of the Survey to Evaluate the Application of Hemospray in the Luminal Tract

Smith et al. J Clin Gastroenterol 2014

<table>
<thead>
<tr>
<th>TABLE 5.</th>
<th>The Use of TC-125 in Patients With Gastrointestinal Ulceration</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC-125</td>
<td>Standard Endoscopic Therapy + TC-125 Secondary Therapy</td>
</tr>
<tr>
<td>No. peptic ulcers</td>
<td><strong>TS-125</strong></td>
</tr>
<tr>
<td>Primary hemorrhage</td>
<td>(99% CI)</td>
</tr>
<tr>
<td>Proportion Forrest Ia</td>
<td>0.52 (0.42)</td>
</tr>
<tr>
<td>Proportion Forrest Ib</td>
<td>0.37 (0.24)</td>
</tr>
<tr>
<td>Total primary failure</td>
<td>0.07</td>
</tr>
<tr>
<td>Forrest Ia failed</td>
<td>0.07</td>
</tr>
<tr>
<td>Forrest Ib failed</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Over-the-Scope Clips Are More Effective Than Standard Endoscopic Therapy for Patients With Recurrent Bleeding of Peptic Ulcers

Arthur Schmidt,² ³ Stefan Gölder,² Martin Grootz,² Alexander Meling,³ James Lau,⁴ Stefan van Dusius,¹ Markus Escher,² Arthur Hoffmann,² Reiner Waetzel,² Heimut Messmann,² Thomas Kratt,³ Benjamin Walter,³ Dominik Büttinger,⁴ and Karel Caca⁴

Gastroenterology September 2018

STING Study

- Hemostasis with OTSC (n=32): Further Bleeding 0.0% (p=0.001)
- Hemostasis with Bleeding Therapy (n=33): Further Bleeding 57.6% (p<0.05)
Ulcers with Low-Risk Endoscopic Stigmata Do Not Require Endotherapy

Scheduled “routine” second-look endoscopy is not recommended

(strong recommendation, high quality evidence)
Repeat Endoscopy Should Be Performed When...

- Clinical evidence for recurrent bleeding
- Poor visualization, incomplete initial exam
- Failure to find clear source of hemorrhage
- Endoscopist believes hemostasis inadequate

Managing Antiplatelet Agents in Acute UGIB

Patients on low-dose ASA for 1st CV prophylaxis

- Low-dose ASA should be withheld at patient presentation
- Resume low-dose ASA after resolution of UGIB if clinically indicated


Managing Antiplatelet Agents in Acute UGIB

Patients on Dual Anti-Platelet Therapy (DAPT)

- Low-dose ASA should be continued without interruption
- Non-aspirin antiplatelet agents (e.g., Plavix / Clopidogrel) should be temporarily withheld, but resumed within 1-7 days

Suggested Reading!


15 main recommendations
40 overall recommendations