**BACKGROUND AND AIM:**

**Background:** Upper endoscopy is the most common method for the diagnosis of upper gastrointestinal tract diseases. It is important to ensure quality of the procedure by improving mucosal visualization, which can sometimes be impaired by the presence of foam, bubbles, and mucus. Simethicone [Dimethylpolysiloxane (DMPS) or activated Dimethicone] was proved to be a good defoaming agent for pre-endoscopic usage to remove bubble and mucus. ESGE guidelines of 2016 on quality standards in upper endoscopy has recommended use of a mucolytic and/or defoaming agents for the improvement of visual clarity of upper endoscopy.

**AIM:** To determine the efficacy of premedication with simethicone and N-acetyl cysteine and timing of administration to improve mucosal visibility before upper endoscopy.

**METHOD**

- A prospective case control study was conducted at department of gastro-enterology at Sri Ramachandra Institute of Higher Education and Research (SRIHER), Tamilnadu. All patients above 18 yrs coming for endoscopy for various indications shall be included in the study.
- Patients were randomized to one of 3 groups simethicone (150 mg)plus N-acetylcysteine(600mg)with 85 ml water (15 ml emulsion of premedication+85 ml water)30 minutes before procedure (group A); 45 minutes before procedure (group B) and no preparation(group C).
- A single endoscopist blinded to the patients group assessed the gastric mucosal visibility scores (range 0–2) at esophagus, stomach and duodenum.
- The sum of the scores from the three sites was considered as the total mucosal visibility score (TMVS),lower scores suggesting best visibility.

<table>
<thead>
<tr>
<th>Sites evaluated</th>
<th>Grade –0 excellent</th>
<th>Grade –1 adequate</th>
<th>Grade-2 inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esophagus</td>
<td>No adherent mucus</td>
<td>Adherent mucus</td>
<td>Inadequate thick</td>
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<td></td>
<td>and clear view of</td>
<td>obscuring vision</td>
<td>mucous or food</td>
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<td>mucus(aspiration</td>
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<td>allowed)</td>
<td>flushing with</td>
<td>amenable to</td>
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<tr>
<td>Stomach</td>
<td></td>
<td>water</td>
<td>aspiration</td>
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<td>Duodenum</td>
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</tbody>
</table>

**RESULTS**

- A total of 150 patients were enrolled in the study, 99(66%) males, and 51(34%) females
- The mean age of the patients is 42.3
- The most common indication for endoscopy is dyspepsia
- The mean mucosal visibility scores is 0.38, 0.34 and 1.76 in group A,B and C respectively

**INDICATION FOR ENDOSCOPY**

- Dyspepsia
- Weight loss
- Anemia
- GERD
- Variceal Screening

**MEAN MUCOSAL VISIBILITY SCORE**

- Group A: 0.38
- Group B: 0.34
- Group C: 3.5

**CONCLUSIONS**

The mucosal visibility and detection of mucosal lesions significantly improved in simethicone group but there was no significant difference on mucosal visibility on timing of pre-preparation.

**REFERENCES**

Chang WK, Yeh MK, Hsu HC, Chen HW, Hu MK. Efficacy of simethicone and N-acetylcysteine as premedication in improving visibility during upper endoscopy. J Gastroenterol. 2014;29:769-774