OBJECTIVES: Idiopathic subglottic stenosis (ISGS) is a rare, inflammatory condition affecting the cartilage and submucosal layers. Surgical options range from dilation to cricotracheal resection and reconstruction, but there is no proven medical management. Methotrexate is in a category of treatment for severe restriction disorders, including dyspnea, stridor, or cough, and are almost always women, usually between 30 to 50 years of age (Valdez and Shapshay, 2002). This differentiates ISGS or the subglottic region of the larynx, in which stenosis is due to scar tissue formation, from the subglottic region, which remains open in ISGS despite scar tissue. It is a disease in which stenosis is a common problem. We conducted a preliminary evaluation of methotrexate for the treatment of ISGS.

METHODS: A retrospective case series was performed for patients treated with methotrexate for ISGS from September 2001 to May 2008. All patients had a confirmed diagnosis of ISGS and were treated with methotrexate at least once weekly. The following variables were recorded in patients meeting inclusion criteria: age; sex; duration of methotrexate therapy; side effects of methotrexate therapy; history of prolonged intubation; history of GERD; and the different length of time that each patient remained on methotrexate. We propose methotrexate as a medical therapy for patients with ISGS.

RESULTS: Four female patients diagnosed with ISGS and treated with methotrexate were included in this study. Three of four patients reported subjective improvements in breathing prior to the discontinuation of the drug. One patient had progression of stenosis. No severe side effects were encountered.

CONCLUSIONS: Our initial trial of methotrexate for ISGS resulted in improved breathing with minimal complications. In our case series, the patients had a history of prolonged intubation. We propose methotrexate as a medical therapy for patients with ISGS.

INTRODUCTION
Subglottic stenosis is defined as stenosis resulting from mechanical injury due to intubation. It is a common problem in the laryngotracheal stenosis. Images obtained by flexible distal chip nasolaryngoscopy. (DeVita et al., 2005). We propose methotrexate as a medical therapy for patients with ISGS. It is a disease in which stenosis is a common problem. We conducted a preliminary evaluation of methotrexate for the treatment of ISGS. One patient had progression of stenosis. No severe side effects were encountered.

RESULTS
<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (years)</th>
<th>Methotrexate duration (weekly)</th>
<th>Duration of methotrexate therapy (months)</th>
<th>Side Effects of methotrexate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29</td>
<td>15 mg PO then 25 mg SC</td>
<td>15</td>
<td>none</td>
</tr>
<tr>
<td>2</td>
<td>51</td>
<td>20 mg PO</td>
<td>29</td>
<td>none</td>
</tr>
<tr>
<td>3</td>
<td>63</td>
<td>15 mg PO</td>
<td>27</td>
<td>none</td>
</tr>
<tr>
<td>4</td>
<td>37</td>
<td>15 mg PO</td>
<td>6</td>
<td>none</td>
</tr>
</tbody>
</table>

Table 1. Case series results for four patients with subglottic subglottic stenosis treated with methotrexate. Patient demographics, treatment course, and side effects are summarized.

CONCLUSIONS
1. In our case series of ISGS patients, most (3 of 4) reported improved breathing during treatment with methotrexate, and no severe side effects were encountered.
2. Methotrexate can be considered as an adjunctive treatment for ISGS.

REFERENCES