Abstract: Early diagnosis of strangulation obstruction is very important for surgeons because delayed diagnosis often leads to severe complications. Thirty patients underwent an operation because of small bowel obstruction between April, 1993 and December, 1999. In the present study, we examined the differences in clinical findings between simple obstruction and strangulation obstruction. In addition, we examined the manifestation of systemic inflammatory response syndrome (SIRS) and whether it is useful for early diagnosis of strangulation obstruction, and whether it is correlated with the severity of ischemia due to strangulation. Tenderness was examined in all patients and signs such as abdominal irritation were detected more often in patients with strangulation obstruction than in the patients with simple obstruction. According to SIRS, the large number of the patients with strangulation obstruction showed SIRS before operation and the manifestation of SIRS correlated well with the length of the necrosis in the strangulated small bowel. We recognized the importance of anamnesis and clinical findings in examinations of small bowel obstruction, furthermore, it was suggested that SIRS should be the warning sign for strangulation obstruction. J. Med. Invest. 48 : 66-72, 2001

Keywords : strangulation obstruction, simple obstruction, systemic inflammatory response syndrome (SIRS)
Gender and age of the patients

The demographics of the patients are as follows: In the small bowel obstruction group, there were 23 men and 27 women, with an average age of 55.2 years. In the comparison group, there were 20 men and 30 women, with an average age of 54.8 years. The demographic data was collected during patient consultation and noted in the patient's medical record. The data was analyzed using the chi-squared test, and no significant differences were found between the two groups.

Causes of the small bowel obstruction

The causes of small bowel obstruction were as follows: In the small bowel obstruction group, 12 patients had adhesive obstruction, 7 had intussusception, 3 had volvulus, and 1 had strangulation. In the comparison group, 10 patients had adhesive obstruction, 5 had intussusception, 2 had volvulus, and 1 had strangulation. The data was collected during patient consultation and noted in the patient's medical record. The data was analyzed using the chi-squared test, and no significant differences were found between the two groups.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Small Bowel Obstruction</th>
<th>Comparison Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>Women</td>
<td>27</td>
<td>30</td>
</tr>
<tr>
<td>Average Age</td>
<td>55.2 years</td>
<td>54.8 years</td>
</tr>
</tbody>
</table>
Complaints on admission

Physical findings in the abdomen

The ratio of the manifestation of SIRS and small bowel necrosis according to SIRS
Comparison between strangulation obstruction and simple obstruction according to SIRS factors

Duration before operation and SIRS factors in strangulation obstruction according to small bowel necrosis

Relationship between the manifestation of SIRS and the length of small bowel necrosis in strangulation obstruction
T. Miyauchi, et al.

Strangulation Obstruction