A Case of Descending Necrotizing Mediastinitis Treated with Continuous Saline Irrigation with a Pleated Drain

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Descending necrotizing mediastinitis (DNM) requires an early and aggressive surgical approach. We report herein on a case of DNM in which continuous saline irrigation with a pleated drain was found to be useful. A 71-year-old man presented with a sore throat and a peritonsillar abscess, CT imaging showed that an abscess with gas had spread widely over the mediastinum. The pus culture showed *Streptococcus milleri* group, and anaerobic bacteria were not identified in this case. The CT imaging findings on the other hand revealed suspected anaerobic infection and so the conditions in this case had caused serious mixed infection. We performed aggressive therapies such as cervicomediastinal and transthoracic drainage combined with broad-spectrum antimicrobial therapy, but the abscess was not cleared. We therefore added transcervical continuous saline irrigation with a pleated drain. The patient responded well to this treatment and was discharged on the 62nd postoperative day. We found that continuous saline irrigation with a pleated drain was useful in this case.

Keywords: descending necrotizing mediastinitis, *Streptococcus milleri*, pleated drainage tubes

References
Endoscopic image of the laryngopharynx at the first visit
The left lateral wall of the oropharynx and hypopharynx is swollen, and the epiglottis has shifted to the right.

CT images of the head, neck and chest at first visit
Low density areas are seen on the CT imaging with abnormal gas patterns that suggest abscesses from the skull base to the mediastinum: the parapharyngeal, retropharyngeal, submandibular, prevertebral, carotid artery and internal spaces.

Changes in the laboratory findings after hospital admission
The increased number of white blood cells and the abnormal level of CRP improved after drainage operations were performed three times with subsequent continuous irrigation with saline through the pleated drainage tubes.

Cross-sectional image of the pleated drainage tube
The pleated drainage tube is used for continuous irrigation. The lumen has several longitudinal folds, so it will not collapse completely even under negative pressure.