Recurrent Retropharyngeal Abscess with Esophageal Perforation due to Chopstick Injury

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Case Presentation

1-year-old girl

C/C: recurrent retropharyngeal abscess and fever

transferred to our hospital
  due to recurrent retropharyngeal abscess and fever
  in spite of
  1) three times of incision and drainage of cervical/thoracic abscess
  2) repair of suspicious esophageal perforation site
  3) intravenous antibiotics treatment for 6 months in other hospital

blood-stained chopstick was found beside her a few days before she presented fever and was admitted in the other hospital
Neck & Chest CT
– First presentation –
Neck CT, Chest CT
– 7 days after 1st drainage –
Neck & Chest CT
- 1 month after 1st drainage -
Recurrence on CT
- 1.5 month after 1\textsuperscript{st} discharge -

Neck & Chest CT
- 2 weeks after 2\textsuperscript{nd} drainage -
Recurrence on CT
- 1 month after 2\textsuperscript{nd} discharge -

Esophagography
- 10 days after 3\textsuperscript{rd} drainage -
Transfer to our hospital 1 month after 2\textsuperscript{nd} recurrence

**Impression**

: Retropharyngeal abscess and mediastinitis due to chopstick injury

**Work-ups to Find the Perforated Site**

Neck CT
Esophagography
Fistulography
Laryngoscopy
Esophagoscopy

: No evidence of perforation of parynx or esophagus

**Treatment Plan**

Long-term conservative management with intravenous antibiotics at home via Broviac catheter to control residual abscess and fever
Neck Lat. X-ray & CT

Esophagography
2nd Admission

after 20 days of IV antibiotics Tx. at home via CVC

poor oral intake, fever and Lt. lat. neck swelling

palpable abscess pocket in her Lt. lat. neck

: about 2 x 3 cm in size

radio-opaque dye was injected into the

1) abscess cavity and

2) esophagus

to find suspected fistula,

but

no evidence of fistula was detected.
Treatments on 2\textsuperscript{nd} Admission

I. Incision and drainage
   - hockey stick incision on Lt. lateral cervical area
   - hemovac drainage catheter insertion

II. Picibanil injection to the abscess cavity
    after the abscess was subsided via drainage catheter
    twice injection of picibanil for 5 days
    no symptomatic change or discharge after picibanil injection

    discharge after removal of the catheter
3rd Admission

10 days after second discharge
pus discharge from cervical incision site

Treatment Plans

I. control of inflammation and perifistula edema
   by IV antibiotics treatment

II. delayed evaluation of fistula
    after control of inflammation
    and decrease of perifistula edema
    to make the fistula visible
Work-ups on 3rd Adm.

IV antibiotics treatment for 1 week

**Fistulography**

: injection of dye to the abscess cavity
  ⇒ drainage of dye to the esophagus

**Esophagoscopy**

: injection of air to the abscess cavity
  ⇒ leakage of air bubble into esophagus
Treatment on 3rd adm. (I)

Tube feeding for one month
to heal the injured esophageal site
with IV antibiotics treatment

⇒

oral feeding of diet mixed with gentian violet dye

⇒ 7 days

violet color tinged at the end of drainage catheter
Treatment on 3rd adm. (II)

**Neck exploration**
- sealing of oral cavity, one nostril, and both ears to prevent leakage to other airways

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- air shooting through the catheter inserted via another nostril to esophagus

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- detection of air leakage on posterior wall of inlet of upper cervical esophagus

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- repair of esophageal perforation
postoperative course: uneventful

discharge on POD #7

no recurrent symptom for 2 months after discharge
Conclusion

Retropharyngeal abscess with fistula tract

Abscess can recur without the control of fistula. Remaining fistula should be considered in the case of recurrent abscess.

Difficulty in control of the abscess is attributable to the difficulty in detection of fistula tract. Control of the perifistula inflammation should precede the effort to detect the fistula tract, and every efforts should be done to find and close the fistula tract.