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內文：

Introduction

1. Lemierre syndrome, also known as postanginal septicemia or human necrobacillosis, is a rare disease of the head and neck that often affects healthy adolescents and young adults.
2. 1936 when the French microbiologist Dr Andre Lemierre best characterized the disease process
3. Lemierre syndrome was a frequent complication of head and neck infections in which nearly all patients died of overwhelming sepsis within 7 to 14 days
4. Since the advent of antimicrobial therapy, and routine use of penicillin in the treatment of oropharyngeal infections, the incidence of Lemierre syndrome has been in steady decline.

Materials and methods

1. The medical records of 3 pediatric patients diagnosed with Lemierre syndrome at 2 urban tertiary care teaching hospitals were analyzed. Data presented include clinical and laboratory findings.

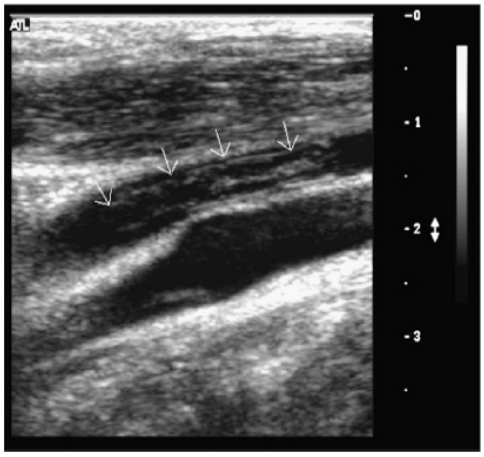
Results

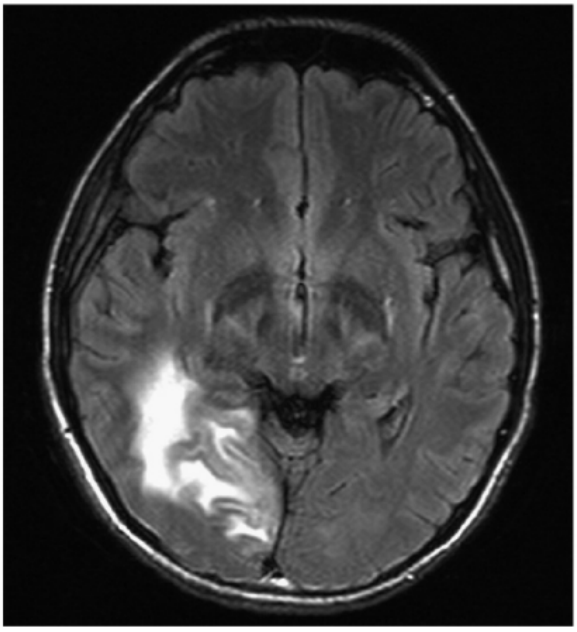
1. A common 1- to 2-week history of fever, sore throat, neck pain, and fatigue was observed in all patients.

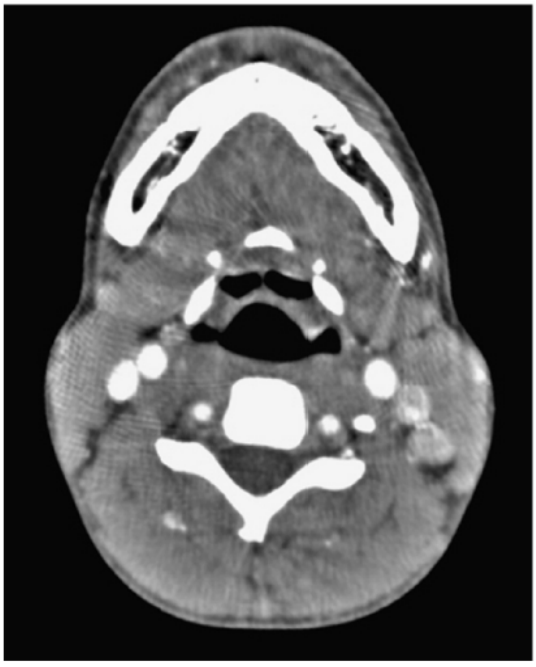
2. patient 1 A 16-year-old adolescent boy

c.c.	1-week history of fever, sore throat, right neck pain, decreased appetite, right facial swelling, and right eye ptosis.
P.E.	WBC :22.3, hemoglobin level of 14 hematocrit of 39 platelet value of 10 C-reactive protein of higher than 20.
Pre-exam. medication	The patient was empirically started on clindamycin, ceftriaxone, and azithromycin after obtaining blood cultures.
Operation	With thrombosis limited to right internal and external jugular veins, the patient was taken to the operating theater; and a right tonsillectomy, drainage of the right parapharyngeal abscess, and placement of a right pressure equalization tube were performed.

Culture exam.	Cultures were sent for Gram stain, anaerobic, aerobic, acid fast bacteria, and fungal evaluation. At this time, blood cultures were found to be positive for Fusobacterium necrophorum,
Post-exam. medication	antibiotic therapy was modified to ceftriaxone and Flagyl







3. patient 2

c.c.	3-day history of fever, otalgia, otorrhea, and scleral icterus
P.E.	BT: 103.6°F(39.7°C) ; Vital signs were stable neutrophil: 3➔ neutropenic(嗜中性白血球減少症) platelets count of 56 total bilirubin of 5.3, direct bilirubin of 3.9 aspartate aminotransferase of 69, alanine aminotransferase of 45 gamma-glutamyl transpeptidase at 147
examinations	cerebrospinal fluid studies and culture, monospot testing, hepatitis panel, urinalysis and culture, varicella reactive protein, cytomegalovirus, Epstein-Barr panel, abdominal ultrasound, and CT
culture	F necrophorum
Tx	6 weeks of amoxicillin antibiotic therapy.

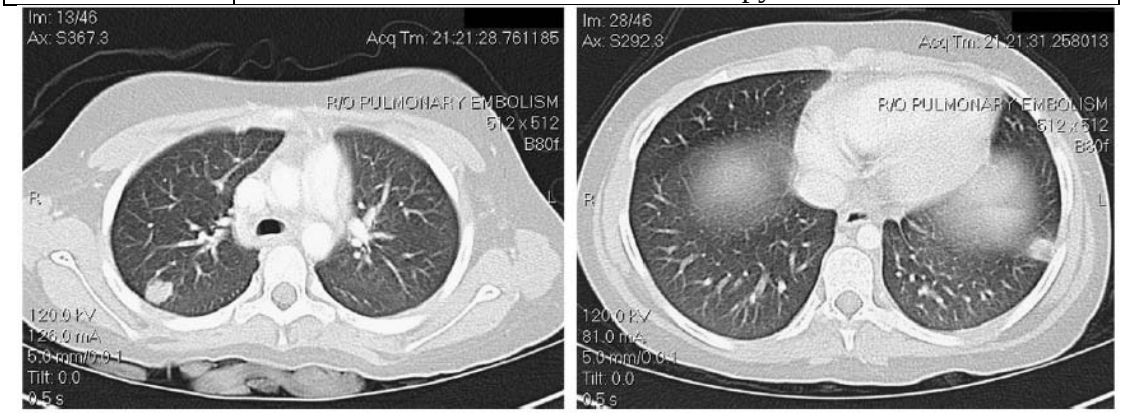


Fig. 4. Series: Axial CT images of the chest with contrast showing opacification of bilateral mastoid processes, bilateral enlarged cervical lymph nodes, and multiple pulmonary nodules.

4. patient 3

c. c.	1-week history of fevers, chills, night sweats, sore throat, decreased appetite, diffuse body aches, and unintentional weight loss. 3-day history of nausea, vomiting, productive cough, and minor swelling of the left knee.
Blood exam	WBC: 25.2; hemoglobin:15 hematocrit 45; platelets 55
CT	bilateral cavitary nodules, bilateral pulmonary effusions, atelectasis in addition to mediastinal and axillary lymphadenopathy
culture	F necrophorum.
Tx	anticoagulation therapy antibiotic therapy for a period of 6 weeks

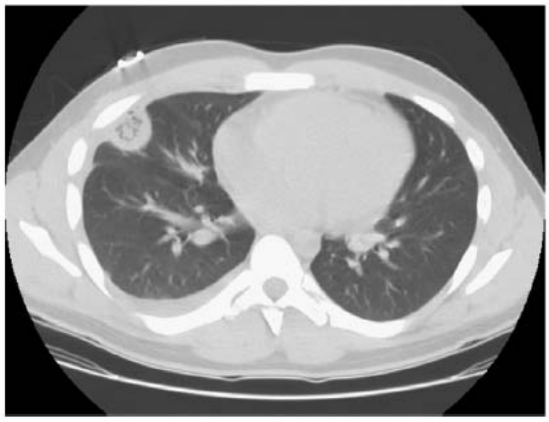


Fig. 5. Axial CT images of the chest with contrast showing bilateral cavitary nodules, bilateral pulmonary effusions, atelectasis, and mediastinal and axillary lymphadenopathy.

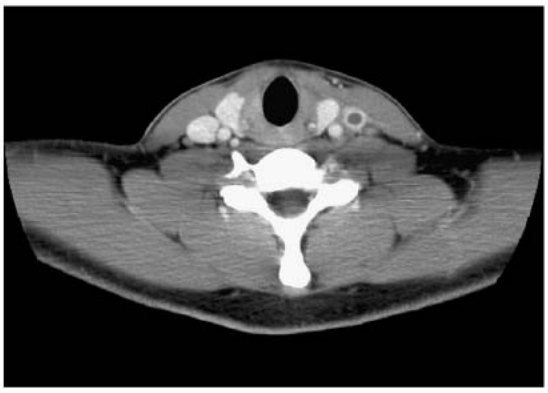


Fig. 6. Axial CT images of the neck with contrast showing lymphadenitis and thrombosis of the left internal jugular vein.

Discussion

1. Lemierre syndrome is a serious complication of progressive head and neck infections.
2. Although a rare entity in modern times, Lemierre syndrome remains a disease of considerable morbidity and potential mortality because of disease progression and potential diagnostic delays.
3. Epidemiology:
   a. incidence➔ 0.6~2.3(1/1,000,000) mortality➔ 4% ~ 18%
   b. more than 70% ➔ 16~25 y/o male > female
   c. 81.7% ➔ F necrophorum ; 5.5% ➔ other bacteria ; 12.8% ➔ not because bacteria
4. Pathogenesis
   a. F necrophorum is a strictly anaerobic, nonmotile, pleomorphic, gram-negative bacillus commonly found in the oral cavity, gastrointestinal tract, and the female genital tract
   b. Multiple virulence factors including cell wall lipopolysaccharide endotoxin, leucocidin, hemolysin, lipase, hemagglutinin, and a cytoplasmic toxin
   c. The disease begins in the palatine tonsils and peritonsillar tissue in approximately 87% of cases
   d. the remaining 13% of cases involve primary pharyngitis, parotitis, sinusitis, mastoiditis, otitis media, and odontogenic infections
   e. all the above area➔ parapharyngeal space➔ carotid sheath➔ thrombophlebits➔ internal jugular vein(lung/ blood system
5. Clinical presentation
   a. The progression of clinical symptoms in Lemierre syndrome closely follows the disease course and has been well documented in the literature
   b. Clinical findings during the primary infection are dependent on the initial site of infection and most are not specific to the syndrome.
   c. Fever is generally present in more than 80% of patients along with abdominal pain, nausea, and vomiting in about 50% of patients
   d. Internal jugular vein thrombophlebitis often manifests as pain and unilateral swelling at the angle of the jaw and along the sternocleidomastoid muscle, and is occasionally associated with trismus.
6. Diagnosis
   a. Because of the clinical infrequency of this condition in modern times, the

diagnosis of Lemierre syndrome is commonly achieved through laboratory studies rather than clinical observation.

b. a blood culture positive for F necrophorum is usually the first diagnostic (in approximately 70% of patients)

c. Contrast-enhanced CT of the neck is the modality of choice for establishing IJV thrombosis and may also be critical in identifying additional head and neck pathologies .

d. Metastatic infection to the lung is usually diagnosed by a chest radiograph with pulmonary infiltrates,

7. Treatment

a. The combination of early diagnosis with aggressive antimicrobial therapy is essential in the efficient treatment of Lemierre syndrome, although an ideal regimen does not exist today.

b. Traditionally, penicillin has been widely used, but B-lactamase production by some F necrophorum limits the use of penicillin as monotherapy ➔ B-lactamase–resistant antibiotic

c. Although drainage of abscesses is encouraged, there are differing views on the use of anticoagulation

Conclusion

1. Lemierre syndrome is a serious complication of head and neck infections, initially involving the oropharyngeal space and ultimately leading to severe systemic compromise.

2. To avoid diagnostic delays we advocate the early use of CT imagining and polymerase chain reaction–based serological screens.

題號	題目
1	對牙科醫師而言，碰到什麼樣的病人要小心可能會引起Lemierre syndrome (A) 拔完38 impaction 傷口狀況良好 (B) 46 根尖有PAP的狀況，右下顎腫起 (C) 11 implant 六個月follow-up 有peri-implantitis， (D) 剛做完25X27 bridge oral hygiene 沒有維持好 oral hygiene，牙齦腫起
答案(B)	出處：American Journal of Otolaryngology–Head and Neck Medicine and Surgery 31 (2010) 38–45
題號	題目
2	以下何者不是Lemierre syndrome的危險性所在 (A) 未及時控制，容易併發肺炎及敗血症 (B) 發生時由於病程不同，發生的症狀也不一，難以確診 (C) 就算發現了也難以治療 (D) 以上皆是
答案(C)	出處：American Journal of Otolaryngology–Head and Neck Medicine and Surgery 31 (2010) 38–45