Lemierre’s syndrome after evacuation of the uterus: a case report
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Key Clinical Message
Even minor surgical interventions can have serious complications. Lemierre’s syndrome is rare and to our best knowledge never before described after gynaecological surgery; however, it should be considered in case of rapidly developing respiratory problems after even simple surgical procedures.

Keywords
Fusobacterium necrophorum, infection, Lemierre’s syndrome, surgical abortion.

Introduction
Lemierre’s syndrome is a septic thrombophlebitis of the internal jugular vein [1]. It is usually caused by Fusobacterium, often Fusobacterium necrophorum [1]. These bacteria are common in the oropharyngeal tract, and the syndrome often originates here. The patient usually presents with sore throat and fever, later complicated by pulmonary infarcts, respiratory dysfunction, and often also arthritic manifestations [1]. Without proper antibiotic treatment, death usually occurs within 14 days due to multiorgan failure caused by microthrombosis [1]. The syndrome is rare, with 3.6 annual cases per million inhabitants in Denmark [2], the incidence being highest between the ages of 14 and 24 years [2].

In this article, we present a case of Lemierre’s syndrome after evacuation of the uterus in an otherwise healthy young woman.

Case Report
A 26-year-old otherwise healthy woman was referred to the department due to rising levels of human chorionic gonadotropin and intermittent vaginal bleeding 6 weeks after a legal medical abortion. A vaginal ultrasound scan had confirmed an intrauterine pregnancy prior to the abortion. A new vaginal ultrasound revealed placental remnants in the uterus, and a surgical evacuation of the uterus was carried out. The operation went without complications, and the patient was discharged later on the day of the surgery.

The following day, the patient was readmitted due to a temperature of 39.5°C and abdominal pain and, suspecting severe endometritis, metronidazole, benzylpenicillin, and gentamicin were administered intravenously. Within 24 h, the patient deteriorated, saturation fell to 90% and respiratory rate rose to around 40 breaths per minute even though oxygen was given by mask. Temperature peaked at 40.7°C even though antibiotics was administered intravenously, C-reactive protein rose to around 300 mg/L and leukocytes to around 15 × 10⁹/L. The patient was moved to the intensive care unit and intubated. Due to the rapid deterioration of respiratory function, a CT scan was performed showing thrombophlebitis of the internal jugular vein and hepatomegaly, and the patient was diagnosed with Lemierre’s syndrome. Benzylpenicillin and gentamicin were discontinued, and instead tazocin and clindamycin were administered in combination with metronidazole. The patient was also treated with heparin injections to prevent further thrombosis.
After 2 weeks of respiratory support and antibiotics at the intensive care unit and another week in a standard hospital ward, the patient had recovered and was discharged.

At no point had the patient presented with symptoms from the oropharyngeal tract. Blood cultures showed infection with *F. necrophorum*, which were also cultivated from the patient’s cervix, and it was concluded that the infection originated from the cervix.

**Discussion**

Infection following surgical evacuation of the uterus is common, occurring after 5–7% of all evacuations [3]. Common infective agents include *Neisseria gonorrhoea*, *Chlamydia trachomatis*, *Gardnerella vaginalis*, and a wide variety of anaerobic bacteria [3]. Usually the infections can be treated with orally administered antibiotics on an outpatient basis [3].

*Fusobacterium necrophorum* is a common finding in the urogenital tract [4], however, normally not a pathogenic one and we have found only one previous report of Lemierre’s syndrome caused by *F. necrophorum* originating from the urogenital tract. This was in a 47-year-old woman who had not undergone surgery [5].

It is not known how infection with *F. necrophorum* causes septic thrombophlebitis of the internal jugular vein. For Lemierre’s syndrome originating in the oropharyngeal tract, both hematogenous spread; local spread through the oropharyngeal lymphatic system and spread through abscesses in the loose connecting tissue close to the internal jugular vein has been suggested [6]. Our case supports the theory of hematogenous spread, as the patient never had symptoms from the oropharyngeal tract, and as *F. necrophorum* was cultivated from the patient’s cervix and not from her oropharyngeal tract. Once infection reached the internal jugular vein, it will spread hematogenously throughout the body, causing a variety of complications, that is, pulmonary embolisms, arthritis, or abscesses [1, 6, 7].

Early diagnosis and correct treatment is crucial to complete recovery [6, 7]. The syndrome is best diagnosed through a CT of the neck and lungs, which will show thrombophlebitis of the internal jugular vein [6, 7]. Antibiotic treatment should be given upon suspicion, and should include metronidazole and beta-lactamase inhibitor [6, 7]. To prevent thromboembolic complications, anticoagulation should be considered [6]. Other efforts, that is, respiratory support or surgical drainage of abscesses are often necessary [6, 7].

**Patient Consent**

The patient gave her consent to the publication.

**Conflict of Interest**

None declared.

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