ISSN: 2755-0206

Journal of Pathology Research Reviews & Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Lemierre's Syndrome: A Complication of Cervicofacial Cellulitis in a Child

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ABSTRACT

Introduction: Lemierre's syndrome complicates oropharyngeal infection and associates septic thrombophlebitis of the internal jugular vein with sepsis and distant septic emboli (especially pulmonary). We report a pediatric case with thrombophlebitis of the jugular vein in the context of cervicofacial cellulitis.

Summary of the Clinical Case: A 2-year-old girl consulted in the emergency room for angina complicated by right cervicofacial cellulitis with thrombosis of the right jugular vein. The diagnosis of atypical Lemierre syndrome was made and the patient received first medical treatment (antibiotic therapy, anticoagulation) allowing a cure without sequelae. And secondary surgical treatment (adenoidectomy and tonsillectomy).

Discussion: The presence of a cervical venous thrombosis complicating an oropharyngeal infection should lead to a search for Lemierre's syndrome (blood cultures and chest CT) rare but serious and require immediate treatment.

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Received: May 15, 2021; **Accepted:** May 21, 2021; **Published:** May 25, 2021

Keywords: Lemierre Syndrome, Jugular Vein Thrombosis, Cervicofacial Cellulitis.

Introduction

Lemierre's syndrome was initially described by Courmont and Cade in 1900, but it was better studied and illustrated by Lemierre in 1936 [1, 2]. The syndrome is defined as thrombosis of the internal jugular vein secondary to an oropharyngeal infection, with the distant formation of septic emboli (with a predilection at the pulmonary level). The advent and development of antibiotics have significantly reduced the death rate from this syndrome to 17% [3]. The syndrome affects both adults and generally healthy children. The germ mainly implicated is an anaerobic gram-negative bacillus bacterium belonging to the Bacteroidaceae family. We describe the case of Lemierre's syndrome in a 2-year-old child following an episode of angina with otitis media.

Case Report

A 2-year-old girl, with no particular pathological history, was referred to the ENT emergency departments by her pediatrician, following the appearance of a voluminous right lateral cervical swelling, did not start under homolateral submandibular, a week after an episode of angina treated with amoxicillin for 3 days. The clinical examination shows an aspect of right cervicofacial cellulitis, with an important inflammatory cheek and cervical swelling that is hard and painful on palpation, associated with a fever of 39 degrees Celsius, tight trismus across the finger (1 cm), and odynophagia [Figure 1]. The oropharyngeal examination found bilateral tonsillar swelling, and otologic examination revealed bilateral serum mucous otitis, all in a context of the deterioration of the general condition, hypotonia, palpitations, and polypnea.

Figure 1: Photographic image showing the extent of cervical and facial tumefaction

A biological assessment was carried out including a complete blood count and a blood ionogram with a CRP assay as well as a blood culture. All came back in favor of a biological inflammatory syndrome with an elevated CRP at 235 mg / l and hyperleukocytosis at 15 thousand / mm and microcytic hypochromic anemia.

A cervicothoracic CT scan with an injection of the contrast product was performed urgently (Figure 2 and 3) revealing a retro stylian right lateral cervical swelling in contact with the parotid without a clear interface, enhanced after injection of the contrast product with the delimitation of the compartment with a dense hetero contour and associated with bilateral spinal lymphadenopathy more marked on the right. Thrombosis of the internal jugular vein related to phlegmonous adenitis. The chest cuts were normal. Cervical ultrasound with venous doppler performed one day after admission showed right sub submandibular phlegmonous adenitis without collection images, with visualization of venous endoluminal material.

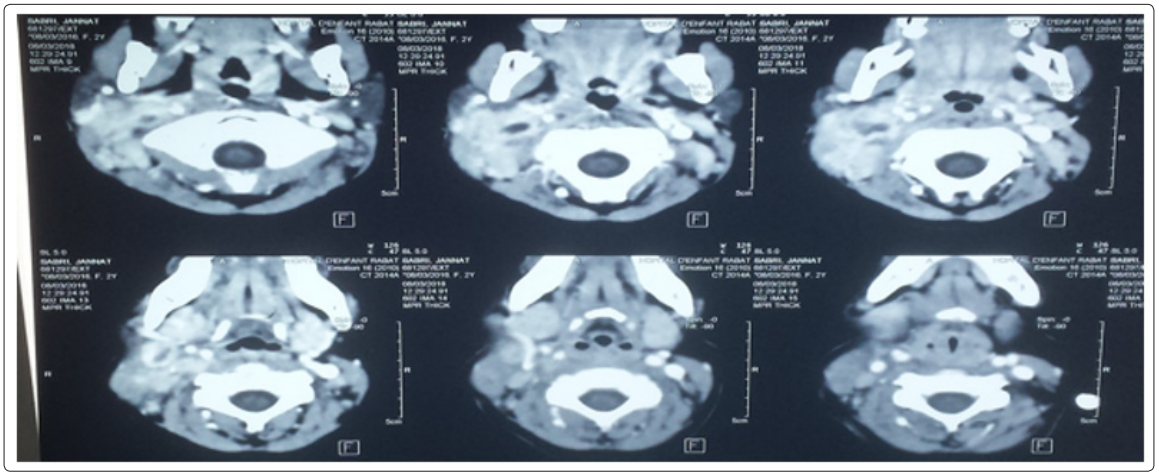

Figure 2: cut off the cervicothoracic scanner in a parenchymal window in axial cut with the injection of the contrast product showing the extent of the thrombosis of the right internal jugular vein

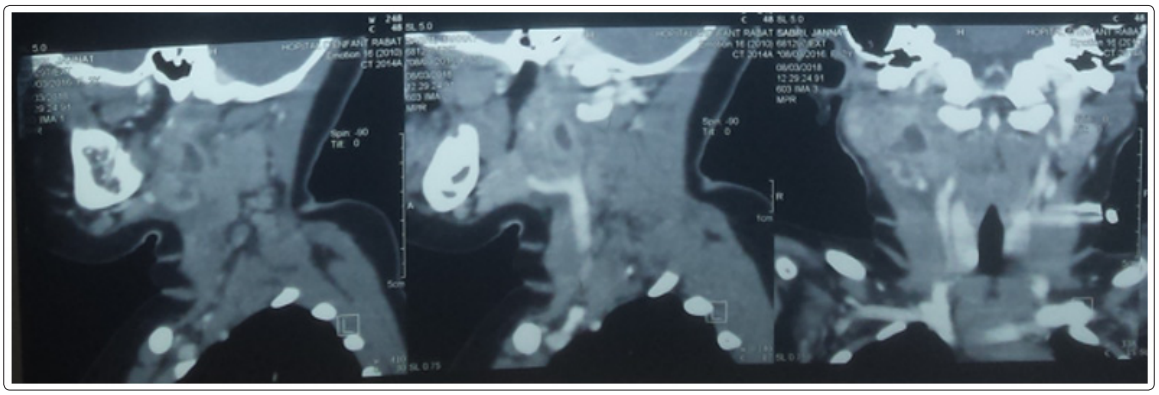

Figure 3: cervical CT scan with an injection of contrast product in a sagittal and coronal section describing the relationship of lymphadenopathy with the parotid glade and the homolateral internal jugular vein

The initial therapeutic management consisted of first medical treatment in the form of probabilistic antibiotic therapy based on ceftriaxone and metronidazole, combined with anticoagulation with low molecular weight heparin (Lovenox) at a curative dose of 200IU / kg twice a day. Local treatment such as ear drops and mouthwash have also been prescribed. Blood culture returned in favor of fusobacterium necrophorum (anaerobic gram-negative bacillus), responding well to the prescribed probabilistic treatment. The course was marked by regression of lymphadenopathy with remission and complete patency of the right internal jugular vein thrombosis under venous Doppler ultrasound control. Secondary surgical treatment such as tonsillectomy and adenoidectomy were chosen.

Discussion

Lemierre's syndrome is considered to be a severe complication involving the vital prognosis secondary to untreated or poorly treated ENT infection. The Syndrome combines both jugular thrombosis and systemic manifestations of septic origin [4]. The diagnosis is often late. The best treatment without sequelae is early treatment with adequate monitoring [2, 5]. It occurs in the majority of cases in young immunocompetent subjects with a peak between 16 and 23 years [6]. The clinical picture is fever, neck pain, respiratory signs: cough, dyspnea [8]. The questioning often finds the notion of ENT infection the few days preceding the symptomatology [7, 8]. The diagnosis of jugular thrombosis was made clear by Doppler which shows a distended, non-compressible vein with echogenic content, without internal flow and not changing with cardiorespiratory movements [4, 9].CT with an injection of contrast product shows a jugular vein increased in size, with hypodense content, with enhanced thickened wall after injection, and without opacification of its lumen. It makes it possible to study the extent of the thrombosis, the possibility of its extension to its collaterals: facial vein and anterior jugular. The extension can be done towards the sinuses at the base of the skull, hence the need for a brain radiological assessment (CT, MRI) when warning signs are present [4]. MRI is a good alternative for the study of venous thrombosis. It is performed without injection

of contrast product, allows to study its extent, and to specify the age of the clot, its recent or old nature [9].

Pulmonary septic emboli are manifested on the chest x-ray by multiple opacities, of variable size, rounded, well-limited, peripheral, systematized or not, most often bilateral, and can progress to cavitation [4, 9]. It is associated with a pleural effusion, more or less important, uni or bilateral, free or partitioned, which can be abscessed [4,9].CT allows a better study of lung lesions, their number, location, characteristics, and better assess excavation [9].

Conclusion

Lemierre's syndrome is a rare disease associating an oropharyngeal infection complicated by septic thrombosis of the internal jugular vein and predominantly pulmonary septic emboli, The diagnosis based above all on a clinical presumption is confirmed by imaging with for examination as a reference cervicothoracic CT scan with an injection of contrast product, and bacteriological examinations (especially in atypical forms). Management is based on emergency antibiotic treatment; anticoagulation is reserved for high-risk situations related to thrombosis and surgical treatment in special cases.

References

1. Courmont P, Cade A (1900) On human sepsis-pyoemia mimicking plague is caused by anaerobic streptobacillus. Arch Med Exp Anat Pathol 12: 393-418.
2. Lemierre A (1936) On certain septicaemias due to anaerobic organisms. Lancet 227: 701-703.
3. Godio M, Ceschi A (2003) A particular angina: about a case of Lemierre syndrome. Schweiz Med Forum 31: 731-734.
4. Screaton NJ, Ravenel JG, Lehner PJ, Heitzman ER, Flower CD (1999) Lemierre syndrome: forgotten but not extinct-report of four cases. Radiology 213: 369-374.
5. Benhayoun M, Llor J, Van-Den-Abbeele T, Elmaleh M, Mariani P, et al. (2003) Bilateral jugular thrombosis in Lemierre syndrome. Arch Pediatr 10: 1071-1074.
6. Valla F, Berchiche C, Floret D (2003) Necro-bacillosis and Lemierre syndrome: a case report. Arch Pediatr 10: 1068-1070.
7. Barry B, Lariven S (2001) Systemic manifestations in pharyngeal infections. Encycl Méd Chir, Otorhinolaryngology 20-515-A-10: 7.
8. Tewfik TL, Husein M, Shapiro RS, Oudjhane K (1999) Lemierre syndrome in an immunocompromised patient. Int J Pediatr Otorhinolaryngol 51: 195-199.
9. Nguyen-Dinh KV, Marsot-Dupuch K, Portier F, Lamblin B, Lasjaunias P (2002) Le- mierre syndrome: usefulness of CT in detection of extensive occult thrombophlebitis. J Neuroradiol 29: 132-135.