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Karl Leiner (1871-1930) and his Syndrome

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ABSTRACT
Karl Leiner (1871-1930) was a well-known Austrian pediatrician. In the 1908, he study 43 babies with a triad of diarrhea weight loss and dermatitis. Later on this clinical phenotype becomes known as Leiner syndrome. This concise report sheds light on Leiner and the syndrome that bears his name.

Key words: Child, dermatitis, leiner syndrome

INTRODUCTION
Karl Leiner (1871-1930) was a world-renowned Austrian pediatrician (Ruhrah, 1935). Among his great contributions to pediatric, he is credited for describing children with a similar clinical phenotype (Leiner, 1908a, b) which was later known as Leiner’s syndrome (http://www.whonamedit.com/synd.cfm/2369.html). Leiner's syndrome: Leiner’s syndrome is a systemic disease diagnosed in infancy. The main cardinal features of this syndrome are (1) generalized dermatitis, (2) intractable diarrhea and (3) marked wasting. The other features that might be associated with this syndrome are recurrent local and systemic infections, usually of gram-negative etiology, central nervous system deficiency and failure to thrive (http://www.whonamedit.com/synd.cfm/2369.html). In 1908, Leiner described 43 children, over five years in children hospital Vienna. Those were affected with similar clinical features (Leiner, 1908a, b).

In his first description, Leiner noticed that the breast-fed infants are most frequently affected and the condition of the children improved clinically when they fed cow milk (Leiner, 1908a, b). The syndrome may be present at birth but more commonly develops within the first few months of life. It has rapid onset in 2nd to 4th month of life. It begins as seborrhoeic eczematosid lesions of the scalp and face or the gluteal region, eventually spreading to other areas. The affected area is bright red and may look swollen. Infants appear uncomfortable but do not itch. In addition, the affected children will have fever, diarrhea, generalized lymphadenopathy, edema, albuminuria and local skin infections and may develop more severe infections that may lead to pneumonia, meningitis and septicaemia which may ends in death.

Cases with Leiner syndrome were treated with hospitalization, to manage fluid and heat loss, Bland emollients and adequate nutrition. Biotin, a water-soluble vitamin that is found naturally in foods such as liver, kidney, meat, milk, egg yolks and vegetables and Essential Fatty Acids (EFAs) were also, found to be useful in treating Leiner disease. This syndrome was thought to be
caused by complement component 5 deficiency (OMIM No. 609538). However, case reports (http://www.whonamedit.com/synd.cfm/2369.html) have described it in relation to deficits in either C₅ or C₆. It seems that, deficiency with hypogammaglobulinemia or other lymphoid deficiency, are also required for its expression. The current understanding is that, Leiner syndrome is a separate entity and it is merely, a clinical phenotype that can be caused by several nutritional and immunodeficiency's disorders (http://www.whonamedit.com/synd.cfm/2369.html). Therefore many authors recommend that this term should be avoided as it is a description phenotype caused by many causes. On other hand, some authors suggest reserving this term, Leiner's disease to erythrodermic seborrheic dermatitis in infants which associated with immunodeficiency disorders, diarrhea and failure to thrive.

Karl Leiner (1871-1930): Karl Leiner, is an Austrian pediatrician, born on January 23, 1871, Flohau, Bohemia (http://www.whonamedit.com/doctor.cfm/2095.html). He was an unusual combination of clinician, practitioner, consultant and scientific investigator. He combined the skills of a consultant physician with that of a laboratory worker and scientific investigator (http://www.whonamedit.com/doctor.cfm/2095.html).

He was educated in Praha and Vienna (http://www.whonamedit.com/doctor.cfm/2095.html) and Ruhrh (1935). He was graduated in Vienna in 1898 and began at once to devote his time to pediatrics (Ruhrh, 1935). He study in the skin clinic as well as the pathological institute at Vienna. He became professor of Pediatric in 1922 and from 1920 was director of the Mautner-Markhof Children's Hospital in Vienna (http://www.whonamedit.com/doctor.cfm/2095.html) and (Ruhrh, 1935). Leiner took a special interest in infectious diseases of children and was the first to use an intracutaneous technique for the vaccination of smallpox and was the first to recognize its relationship to post-vaccinal encephalitis. He investigated poliomyelitis and other viruses and bacteria at the Wechselbaum Institute (http://www.whonamedit.com/doctor.cfm/2095.html). He was the first to call the attention to the annular erythema observed in cases of rheumatic endocarditis (Ruhrh, 1935). Leiner died on April 24, 1930, in Vienna (http://www.whonamedit.com/doctor.cfm/2095.html).

REFERENCES