

Case Report

Clinical Diagnosis of Farber's Disease- A Rare Case Report

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ABSTRACT

Farber's disease is an extremely rare autosomal recessive (AR) condition in which there is deficiency of enzyme ceramidase, this causes accumulation of fatty material in joints, liver, throat and CNS. Only 80 cases are reported worldwide till date. Here we report a case of 3 months old male baby admitted to paediatric casualty of MKCG medical college with complains of abnormal cry, swelling of multiple joints with pain during movement of limbs since birth. On examination there was hepatomegaly of 3 cm. Hence a provisional diagnosis of some storage disorder was made. Later because of the presence of triad of hoarse cry, subcutaneous nodules and joint contracture, a clinical diagnosis of Farber's disease was made.

Key Words: Farber's disease, Autosomal recessive, storage disorder.

INTRODUCTION

Farber's disease is also known as Farber lipogranulomatosis, ceramidase deficiency, fibrocystic dysmucopolysaccharidosis and lipogranulomatosis. [1] It is named after Sydney Farber. [2] It is a AR lysosomal storage disease in which the lipid metabolism is affected due to deficiency of enzyme ceramidase, which helps in breakdown of fatty material in the body cells. [4] The gene responsible for making the ceramidase enzyme is ASAH1 gene. [5] The mutation of this gene leads to Farber's disease. The fatty material instead of breaking down accumulates in various parts of the body leading to signs and symptoms. This disease onset is typically in the 1st few weeks of life. The three classical signs are hoarseness of voice or weak cry, lipogranulomatosis in skin and in other tissue and painful joints. Other symptoms may include moderately impaired mental

ability, problems with swallowing, vomiting arthritis and xanthomas. Most children with Farber's die by the age of 2 years usually from the lung disease.

CASE REPORT

A 3 month old 2nd order male baby, born out of a consanguineous marriage with mother having obstetric history of a still birth 18 months back. The baby was admitted with complains of abnormal cry and swelling of multiple joints with pain during movement since birth. On examination, all the large and small joints of both upper and lower limb were swollen with subcutaneous nodules around the joints. There was hyperpigmentation around both the ankle (Fig 1). Hepatomegaly of 3cm was present. All the routine blood tests were normal. On viewing baby gram there was no evidence of osteopenia, osteogenesis imperfecta or any other skeletal abnormality

was found. USG abdomen showed hepatomegaly. A provisional diagnosis of some storage disorder was made. Later because of the presence of triad of hoarse cry, subcutaneous nodules and joint

contracture (Fig 2), a clinical diagnosis of Farber's disease was made. The blood ceramidase level and genetic testing could not be done due to financial constraints.



Fig 1 showing hyperpigmentation of ankle



Fig 2 showing subcutaneous nodules and swelling

DISCUSSION

Farber's disease can be of 7 types

Type 1 is the classic form of the disease with early subcutaneous nodules, joint involvement and hoarseness in all cases. Progressive neurologic involvement and lung disease are reported in many cases. [6]

In contrast, type 2 and 3 patients show only slight or no symptoms of central nervous system disease. However, they still have a severe disease as a result of granulomatous inflammation leading to subcutaneous nodules, joint pain and contractures, hoarseness, failure to thrive and respiratory involvement. [6]

Patients with type 4 FD present with severe neurologic deterioration and large hepatosplenomegaly already in the neonatal period. Histopathology shows massive granulomatous infiltrations by accumulating macrophages in liver, spleen, lymphoid tissue, thymus and lungs. [7]

The major clinical presentation in type 5 patients is a progressive CNS

dysfunction, beginning at 1 to 2 1/2 years of life and manifesting in tetraplegia, loss of speech, myoclonia, seizures and mental retardation. [8]

Type 6 is a combination of type 1 FD and Sandhoff disease, another lysosomal storage disorder caused by hexosaminidase A and B enzyme defects. [9] Both acid ceramidase and hexosaminidase A and B are involved in the catabolism of glycosphingolipids.

One patient is classified as type 7, showing a combined deficiency of glucocerebrosidase, galactocerebrosidase and ceramidase due to a mutation of prosaposin, the precursor protein for two sphingolipid activator proteins. [9]

Our case is fitting to classic form (TYPE 1)

CONCLUSION

The two main differential diagnosis in this case are familial hypercholesterolemia and arthrogryposis multiplex congenita. In both these cases there will be swelling of mainly major joints

but it would never be since birth. There is no specific treatment for Farber's disease and confirmation is difficult hence a clinical diagnosis would be helpful in counselling the parents.

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