The Impact of Progressive Familial Intrahepatic Cholestasis (PFIC)

Progressive Familial Intrahepatic Cholestasis (PFIC) is a rare genetic (inherited) disorder caused by defects in genes that produce proteins needed to form bile and transport it throughout the body. Bile, which helps to digest fats, is transported through ducts from the liver to the gallbladder and small intestine.

A blockage of bile prevents the toxins from leaving the body which damages liver cells and causes a harmful buildup of waste in the blood stream, preventing the body from absorbing fats and vitamins as it should.[1]

There are several known types of PFIC, all characterized by **impaired bile flow and progressive liver disease**. This includes PFIC2, or BSEP deficiency*, which accounts for two-thirds of the PFIC patient population in the US and Europe[2]

Signs of PFIC begin **during infancy**[3]

PFIC is caused by mutations in proteins that control bile flow and often result in[3]

- **debilitating itch, AKA pruritus**
- **stunted growth**
- **vitamin deficiency**
- **progressive liver damage**
- **ultimately liver failure, if untreated**

Signs of PFIC first occur during infancy and include[1]:

- Yellow skin or eyes, AKA jaundice
- Severely itchy skin, AKA pruritus
- Stunted growth
- High blood pressure in the portal that supplies blood to the liver
- Enlarged liver and spleen

The most prominent and troublesome symptom of PFIC is a severe, **unrelenting itch, also known as pruritus**, that is not relieved by scratching. This can cause loss of sleep, irritability, and trouble focusing in school[4]

Diagnosis entails[1]:

- Genetic testing
- Blood tests
- Liver biopsy

There are fewer than **1,000** children with PFIC2 in the United States and Europe, respectively[5]

There are no approved, effective therapies for PFIC. Most options for survival eventually include liver transplantation or biliary diversion surgery.[4]

To learn more about PFIC, please visit: mirumpharma.com/patients-and-families/pfic/

*BSEP deficiency: Mutations in the ABCB11 gene are responsible for deficiency of the BSEP protein. This gene tells the body to make a protein called the bile salt export pump (BSEP). This protein is found in the liver and moves bile salts out of liver cells. Mutations in this gene cause bile acids to build up in liver cells causing damage.[6]

References:

1. https://www.cincinnatichildrens.org/health/p/pfic **2.** ncbi.nlm.nih.gov/pmc/articles/PMC2647530/ **3.** ghr.nlm.nih.gov/condition/progressive-familial-intrahepatic-cholestasis **4.** ncbi.nlm.nih.gov/pmc/articles/PMC4017198/ **5.** Mirum Pharma market research **6.** childliverdisease.org/liver-information/childhood-liver-conditions/progressive-familial-intrahepatic-cholestasis/