

Comparing Treatments for Resistant Kawasaki Disease -- The KIDCARE Study

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What was the research about?

Kawasaki disease is a rare childhood illness that inflames blood vessels. Symptoms include high fever; rash; and swollen tongue, hands, and feet. The disease can sometimes cause a dangerous bulge, called an aneurysm, in the blood vessels that supply the heart.

Most children recover from Kawasaki disease after treatment with intravenous immunoglobulin, or IVIG. But in 10 to 20 percent of children, fever persists or returns, which doctors call resistant Kawasaki disease. These children have a high risk of aneurysm.

In this study, the research team looked at the safety and effectiveness of two treatments for children with resistant Kawasaki disease:

- A second dose of IVIG
- A medicine called infliximab

What were the results?

Infliximab was safe and effective for children with resistant Kawasaki disease. Compared with children who received a second dose of IVIG, children who received infliximab:

- Were less likely to have fever after treatment.
- Had shorter hospital stays.
- Had fewer side effects and serious adverse events such as anemia. The research team defined a serious adverse event as one that resulted in a hospital stay, disability, or even death.

The two treatments didn't differ in:

- Heart scores that measure if a child has an aneurysm.
- Lab tests that measure inflammation.

Who was in the study?

The study included 103 children ages 4 weeks to 17 years with resistant Kawasaki disease. All received care at one of 30 health centers across the United States. Among children, 58 percent were White, 18 percent were Black or African American, 11 percent were Asian, 8 percent were more than one race, and less than 4 percent were unknown or other races. The average age was 2, and 57 percent were boys.

What did the research team do?

The research team assigned children by chance to receive either a second dose of IVIG or infliximab. All children had received a first dose of IVIG and had a fever that persisted or returned within 36 hours. Children who still had a fever seven days later took the other treatment.

Parents completed surveys about their child's symptoms four times on the first day of treatment and then once daily for two weeks. Children had an echocardiogram when they started the study and two weeks after leaving the hospital. An echocardiogram uses sound waves to take pictures of the heart.

People who had Kawasaki disease as children, and parents of children with Kawasaki disease, gave input on the study.

What were the limits of the study?

Doctors across health centers may have interpreted echocardiogram results differently. Also, the study didn't enroll children who already had aneurysms from Kawasaki disease. Results may differ for these patients.

Future research could look at the best dose of infliximab for children with resistant Kawasaki disease.

Studies could also include children with heart damage from Kawasaki disease.

How can people use the results?

Doctors and parents can use these results when considering treatment for children with resistant Kawasaki disease.

To learn more about this project, visit www.pcori.org/Burns440.