Study Suggests Existence of Rheumatoid Arthritis Gene

by YVONNE BANKS

Is There a Rheumatoid Arthritis Gene?

New studies suggest that some women may develop rheumatoid arthritis as a result of carrying their partner's baby. How is this so? Researchers say that some men have certain "high risk" genes, which they can pass on to the mother of their children, making her more likely to develop RA.

What happens is cells from the fetus enter the woman's bloodstream while she is pregnant. If the baby has inherited certain genes from the father, known as HLA genes, then the mother is at higher risk to develop rheumatoid arthritis.

Occasionally the woman's immune system will attack the baby's free floating cells – free fetal DNA – as though it they were an infection, which can also trigger RA. Women are much more likely to get RA, reinforcing the idea that pregnancy and these high risk cells are the cause in many cases.

Also backing the notion is the fact that women with RA are more likely to have these fetal cells, which can be present for decades after pregnancy.

Researchers are looking to find new ways to assess a woman's risk to RA on whether her children or partner carries the high-risk versions of the genes.

A Possible Cure in the Horizon?

Japanese researchers have discovered one of the substances that cause RA, which could lead to a cure for the disease. Patients with RA suffer from inflammation caused by the body's own immune cells attacking the body itself. It had been unknown of which molecules in the body were targeted by the immune cells, until now.

The researchers found the target molecule through experimentation with lab mice. The team had found that immune cells had adversely reacted to this target molecule in 17 percent of all RA patients involved in the study. They suggest that by suppressing the function of the T cells by using this target molecule, a successful treatment could be made, and eventually maybe even a cure.

In healthy people, the T cells detect pathogens invading the body and eliminate them. The T cells have various sensors to respond to varying foreign bodies. There is potentially millions of these types of cells in the human body. If there is an abnormality in the control of T cells, the immune cells will attack normal body cells instead. This type of reaction leads to rheumatoid arthritis and other autoimmune diseases.