

Why do TNF blocking drugs not work on patients with multiple sclerosis who have the shortened protein?

Solution

Biologic drugs that block TNF from signalling to cells have revolutionized treatment for autoimmune conditions such as rheumatoid arthritis over the past decade. But such autoimmune condition as multiple sclerosis (MS) is distinct. Drugs that block the activity of TNF tend not work in patients with MS at all. In fact, they usually make symptoms worse, and they may even have caused the disease in people predisposed to it. It is unclear how TNF influences MS, but in patients with the shortened TNF receptor 1 (TNFR1), the TNF-blocking drugs could be providing a double-whammy by suppressing TNF signalling further. It is not clear whether TNF-blocking drugs might help MS patients who have the full-sized TNFR1.