

Immune drug helps patients with frequently relapsing kidney disease

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In patients with a frequently-relapsing form of kidney disease, relapses decreased approximately five-fold for at least one year after patients took a single dose of rituximab, an antibody that targets the immune system and is often used to treat immune disorders such as lymphoma and arthritis. The findings, which will appear in an upcoming issue of the *Journal of the American Society of Nephrology (JASN)*, suggest that this drug may provide considerable benefits for patients.

For most children and young adults with a kidney disorder called idiopathic nephrotic syndrome (INS), the disease is thought to arise from an abnormal immune response. Researchers have shown that the drug rituximab can help children with INS that responds to standard treatments consisting of steroids and immunosuppressants. Therefore, rituximab may allow such [patients](#) to discontinue these potentially toxic medications, which can affect children's growth and can increase patients' risks for heart problems, infections, cancer, and other conditions.

But for children and adults whose disease does not respond as well to standard treatments—and is categorized as being "frequently-relapsing"—the benefits of rituximab are less clear.

To investigate, Piero Ruggenti, MD and Giuseppe Remuzzi, MD, FRCP (Mario Negri Institute for Pharmacological Research, in Italy) led a team that evaluated rituximab therapy followed by immunosuppression withdrawal on disease recurrence in 10 children and 20 adults with IMN

who had suffered two or more recurrences over the previous year. Patients received one or two doses of rituximab intravenously.

Among the major findings after one year:

- All patients were in remission: 18 were treatment-free and 15 never relapsed.
- Compared with the year before rituximab, total relapses decreased from 88 to 22 and per-patient median number of relapses decreased from 2.5 to 0.5.
- After rituximab, per-patient steroid maintenance median dose decreased from 0.27 to 0 mg/kg, and median cumulative dose to achieve relapse remission decreased from 19.5 to 0.5 mg/kg.
- Patients' kidney function increased, and rituximab was well tolerated.

The study reveals that rituximab can effectively and safely prevent recurrences and reduce the need for immunosuppression in frequently-relapsing INS.

"Finding that a relatively safe treatment like rituximab may prevent relapses of INS and avoid or reduce the need for steroids and other immunosuppressants may have major clinical implications since rituximab therapy might help limit the complications of both the disease and of concomitant treatments that are often devastating," said Dr. Remuzzi. "Importantly, the results were obtained with one single dose of [rituximab](#), whereas previous protocols recommended the use of four and even more doses," he added.

More information: The article, entitled "Rituximab In Steroid-Dependent or Frequently Relapsing Idiopathic Nephrotic Syndrome," will appear online at jasn.asnjournals.org/ on January 30, 2014.

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