mTORC pathway involved in antiphospholipid sx vasculopathy

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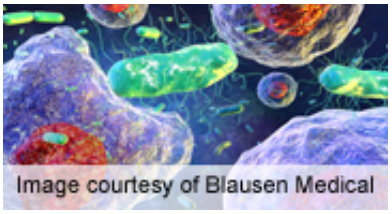

The mammalian target of rapamycin complex pathway seems to be involved in antiphospholipid syndrome-associated vascular lesions, according to a study published in the July 24 issue of the *New England Journal of Medicine*.

(HealthDay)—The mammalian target of rapamycin complex (mTORC) pathway seems to be involved in antiphospholipid syndrome-associated vascular lesions, according to a study published in the July 24 issue of the *New England Journal of Medicine*.

Guillaume Canaud, M.D., Ph.D., from Université Paris Descartes, and colleagues examined the molecular pathways involved in the vasculopathy of antiphospholipid syndrome. Double immunostaining was used to assess pathway activation in mTORC. In addition, the nature of cell proliferation was assessed in the vessels of patients with primary or secondary antiphospholipid syndrome nephropathy.

The researchers found that patients with antiphospholipid syndrome nephropathy exhibited indications of mTORC pathway activation in the

vascular endothelium of proliferating intrarenal vessels. Immunoglobulin G antibodies from patients with antiphospholipid syndrome stimulated mTORC in cultured vascular endothelial cells through the phosphatidylinositol 3-kinase-AKT pathway. Compared with patients with antiphospholipid antibodies who required transplantation and were not receiving sirolimus, those who were receiving sirolimus had no recurrence of vascular lesions and decreased vascular proliferation on biopsy. Seventy percent of patients treated with sirolimus had a functioning renal allograft at 144 months after transplantation, compared with 11 percent of untreated patients. The vessels of autopsy specimens from patients with catastrophic antiphospholipid syndrome had evidence of mTORC activation.

"Our results suggest that the mTORC pathway is involved in the vascular lesions associated with the antiphospholipid syndrome," the authors write.

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