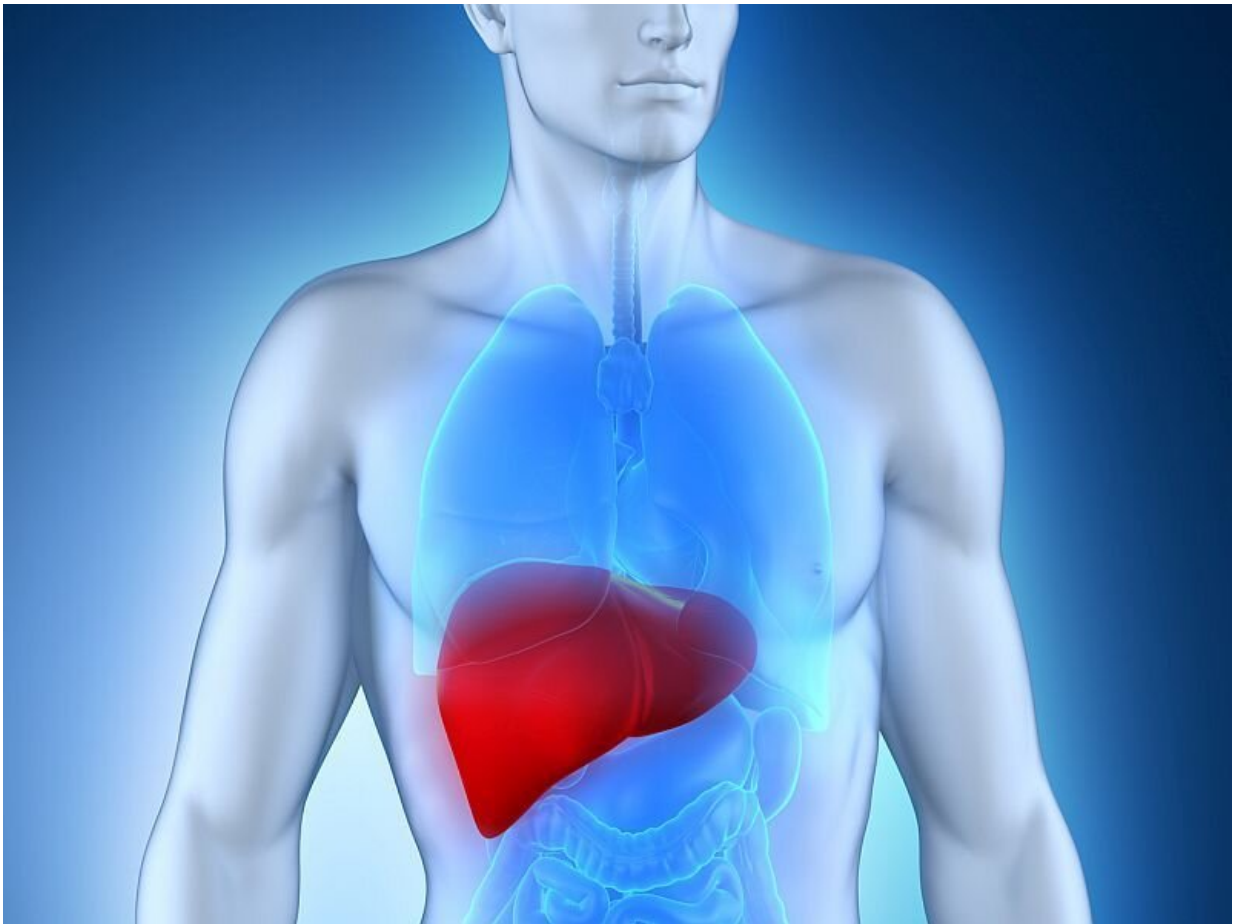


Machine perfusion improves function of deceased donor livers

March 15 2021



(HealthDay)—The risk for nonanastomotic biliary strictures is lower

with hypothermic oxygenated machine perfusion, rather than conventional static cold storage, of a liver obtained from a donor after circulatory death, according to a study published online Feb. 24 in the *New England Journal of Medicine*.

Rianne van Rijn, M.D., Ph.D., from the University of Groningen in the Netherlands, and colleagues conducted a multicenter, controlled trial, involving [patients](#) who were undergoing transplantation of a liver obtained from a donor after circulatory death. Participants were randomly assigned to receive the [liver](#) after hypothermic oxygenated [machine perfusion](#) (machine-perfusion group; 78 patients) or after conventional static cold storage alone ([control group](#), 78 patients).

The researchers found that nonanastomotic biliary strictures occurred in 6 and 18 percent of patients in the machine-perfusion and control groups, respectively (risk ratio, 0.36). Postreperfusion syndrome occurred in 12 and 27 percent of patients in the machine-perfusion and control groups, respectively (risk ratio, 0.43). Early allograft dysfunction occurred in 26 and 40 percent of machine-perfused and control livers, respectively (risk ratio, 0.61). Compared with control, after machine perfusion, the cumulative number of treatments for nonanastomotic biliary strictures was lower by a factor of nearly 4. The two groups had a similar incidence of adverse events.

"Machine perfusion has the potential to improve the function of organs obtained from deceased organ donors and to allow the assessment of organs of uncertain quality, which might dramatically increase the pool of livers available for transplantation," write the authors of an accompanying editorial.

One author from the study disclosed financial ties to the pharmaceutical industry.

More information: [Abstract/Full Text \(subscription or payment may be required\)](#)
[Editorial \(subscription or payment may be required\)](#)

Copyright © 2020 [HealthDay](#). All rights reserved.

Citation: Machine perfusion improves function of deceased donor livers (2021, March 15)
retrieved 24 April 2024 from
<https://medicalxpress.com/news/2021-03-machine-perfusion-function-deceased-donor.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.