

Simvastatin to reduce pulmonary dysfunction in patients with acute respiratory distress syndrome: the HARP-2 RCT

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Plain English summary

The HARP-2 trial

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Plain English summary

The increasing demand for care in an intensive care unit (ICU) currently exceeds supply, leading to a need to explore treatments that may reduce the use of ICU resources and result in increased capacity and improved access to appropriate facilities for critically ill patients. The aim of Hydroxymethylglutaryl-CoA reductase inhibition with simvastatin in Acute lung injury to Reduce Pulmonary dysfunction (HARP-2) was to investigate if simvastatin, a drug commonly used to treat high cholesterol, is safe and effective in the treatment of acute lung injury (ALI).

The study was open to patients aged ≥ 16 years who were admitted to specified ICU wards in the UK and who were suffering from ALI. A total of 540 patients were recruited and were randomly allocated to receive either 80 mg of simvastatin or 80 mg of placebo (an identical 'dummy' tablet) for up to 28 days.

To test how simvastatin might work to ease the patient's condition, blood and urine samples were taken to determine the ways in which lung injury develops and to examine how long patients needed assistance with their breathing on a ventilator and how quickly they recovered. Patients were contacted at 3, 6 and 12 months after discharge to fill in a questionnaire to measure the residual effects of the illness on their lives.

The study found that simvastatin was relatively safe with an increase in adverse events but no increase in serious adverse events. The study results show that simvastatin did not significantly improve clinical outcomes for patients and is not of benefit in the management of ALI, but may be used in critically ill patients with a coexisting condition for which a statin is normally prescribed.

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