Low-density lipoprotein apheresis: an evidence-based analysis

Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
<p>LDL apheresis is a selective treatment that removes LDL-C and other atherogenic lipoproteins from the blood while minimally impacting other plasma components such as HDL-C, total serum protein, albumin and immunoglobulins. As with PE, FH patients require lifelong therapy with LDL apheresis on a weekly/biweekly basis with concomitant drug therapy.</p>

On April 23, 2007, an application was submitted to the Ontario Health Technology Advisory Committee for a review of low-density lipoprotein (LDL) apheresis for the treatment of patients with familial hypercholesterolemia (FH). Low-density lipoprotein apheresis is an extracorporeal process that selectively removes LDL cholesterol (LDL-C) and other atherogenic lipoproteins from the blood. On May 25, 2007, the Ontario Health Technology Advisory Committee accepted the application and asked the Medical Advisory Secretariat to conduct an evidence-based analysis on LDL apheresis for the treatment of FH patients.

Authors' conclusions
For HMZ FH patients, the benefits of LDL apheresis clearly outweigh the risks and burdens. According to GRADE, the recommendation would be graded as strong, with low- to very low-quality evidence. In both HMZ and HTZ FH patients, there is evidence of overall clinical benefit of LDL apheresis from case series studies. Low-density lipoprotein apheresis has several advantages over the current treatment of PE, including decreased exposure to blood products, decreased risk of adverse events, conservation of nonatherogenic and athero-protective components, such as HDL-C and lowering of other atherogenic components, such as fibrinogen. In contrast to HMZ FH patients, there remains a lot of uncertainty in the social/ethical acceptance of this technology for the treatment of refractory HTZ FH patients. In addition to the substantial costs, it is unknown whether the current health care system could cope with the additional demand. There is uncertainty in the estimates of benefits, risks and burdens. According to GRADE, the recommendation would be graded as weak with low- to very-low-quality evidence.

Final publication URL

Additional data URL

Indexing Status
Subject indexing assigned by CRD

MeSH
Blood Component Removal

Language Published
English

Country of organisation
Canada
Province or state
Ontario

English summary
An English language summary is available.

Address for correspondence
20 Dundas Street West, 10th Floor, Toronto, ON M5G 2N6, CANADA, Tel: +1 416 314 3999, Fax: +1 416 325 2364
Email: MASinfo.moh@ontario.ca

AccessionNumber
32007000620

Date bibliographic record published
30/11/2007

Date abstract record published
30/11/2007