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NEW REPORTS FROM MAS & OHTAC

The following Recommendations and MAS reports have been recently completed and are available, or will shortly become available, for download at the [Ontario Health Technology Assessment Series](#) (OHTAS) website.

1. Endovascular Laser Treatment for Varicose Veins

Varicose veins (VV) are twisted or elongated veins caused by poorly functioning valves and decreased elasticity in the vein wall resulting in reflux. Left untreated, this can lead to various complications such as varices rupture with hemorrhage and superficial thrombophlebitis. The management of VV can be carried out through conservative therapy, sclerotherapy (the injection of a chemical irritant into the vein), phlebectomy (the use of special hooks to remove veins through multiple incisions in the skin), or surgical vein stripping, depending on the size and extent of the condition.

Imaging guided endovascular techniques involving lasers (ELT) are increasingly being offered as alternatives to surgery for VV. Rather than surgically removing the vein, ELT works by destroying or ablating the damaged vein segment. This minimally-invasive treatment can be performed in outpatient clinics by various medical specialties including surgeons (vascular or general), interventional radiologists and phlebologists.

The MAS analysis found that ELT was as effective as surgery in the short term with a shorter patient recovery times, although longer term follow-up is needed to assess recurrence. Patient satisfaction was high after both treatments but patient preference was much more strongly for ELT.

2. Extracorporeal Lung Support Technologies - Bridge to Recovery and Bridge to Lung Transplantation in Adult Patients

For decades, the first choice of treatment for patients with acute respiratory distress syndrome (ARDS) and progressive chronic respiratory failure has been mechanical ventilation. Yet recent clinical studies have suggested that ventilator-induced lung injury can adversely affect the lungs and patient outcomes. As an alternative, extracorporeal lung support technologies, specifically, interventional lung assist (ILA) and extracorporeal membrane oxygenation (ECMO), may play an important role in the clinical management of patients with lung failure. Although these technologies do not treat the underlying lung condition, they can improve the rate of gas exchange, while enabling the implementation of a protective ventilation strategy to prevent further damage to the lung tissues imposed by the ventilator.

The Medical Advisory Secretariat undertook a review of these technologies to assess their effectiveness, safety, and cost-effectiveness in the improvement of survival rates for patients with acute pulmonary failure and those with end stage chronic progressive lung disease. Based on this review, OHTAC recommended that provision of ILA or ECMO in adults in Ontario should be conditional on evidence development to provide additional information. OHTAC was unable to make recommendation on ex vivo application of ILA without further evidence. Full recommendations are on the website.

3. Multiple Sclerosis and Chronic Cerebrospinal Venous Insufficiency - Preliminary Evidence Examination

On May 28, 2010, OHTAC met to determine if there is sufficient evidence to conduct a complete evidence based review of the effectiveness and safety of imaging investigations and treatment of chronic cerebrospinal venous insufficiency (CCSVI) in patients with multiple sclerosis (MS). They concluded that a full review must

await the results of current research. The preliminary report and OHTAC's recommendations are posted on the website.

4. Cardiac Imaging Mega-Analysis

MAS identified five key non-invasive cardiac imaging technologies for the diagnosis of coronary artery disease (CAD) and evidence-based analyses have been prepared for each of these imaging modalities: cardiac magnetic resonance imaging (cardiac MRI); single photon emission computed tomography (SPECT); 64-slice computed tomographic angiography (CT Angiography); stress echocardiography (stress ECHO); and, stress ECHO with contrast. The Toronto Health Economics and Technology Assessment (THETA) collaborative has also produced an economic analysis entitled *The Relative Cost-effectiveness of Five Non-invasive Cardiac Imaging Technologies for Diagnosing Coronary Artery Disease in Ontario*.

The MAS reports – which represent one of the most comprehensive undertakings in the examination of these technologies to date – will be available for comment along with OHTAC's recommendations concerning the clinical utility of these technologies.

5. Use of Contrast Agents with Echocardiography in Patients with Suboptimal Echocardiography

This evidence-based analysis describes the effectiveness of microsphere contrast agents which are used when the visualization of cardiac structures during a non-contrast echocardiogram has been inadequate. While contrast agents can be used in both resting and stress echocardiography it is important to note that at present they are only indicated for resting echocardiography in Canada.

COMING SOON

Non-Invasive Cardiac Imaging Technologies for the Assessment of Myocardial Viability

In July 2009, the Medical Advisory Secretariat (MAS) began work on *Non-Invasive Cardiac Imaging Technologies for the Assessment of Myocardial Viability*. After an initial review of the strategy and consultation with experts, MAS identified five key, non-invasive cardiac imaging technologies that can be used for the assessment of myocardial viability: positron emission tomography (PET); cardiac magnetic resonance (cMR) imaging; dobutamine echocardiography (with and without contrast enhancement); and, single photon emission computed tomography (SPECT). An earlier review conducted by MAS in 2005 determined that PET was more sensitive than either dobutamine echocardiography or SPECT, and more cost-effective. There was inadequate evidence, however, to compare PET with cMR – the subject of this updated report series.

CURRENTLY UNDER REVIEW

The following topics are under review at MAS:

Clinical Utility of Serologic Testing for Celiac Disease in Ontario - This review will establish whether there is sufficient evidence to support the use of serologic tests for the diagnosis and screening of celiac disease in Ontario. *Anticipated Completion: Summer 2010*

CT and MRI Scans in the Evaluation of Chronic Headaches – This review will examine the appropriate indication for diagnostic imaging in the evaluation of headache and the relative effectiveness of MRI and CT to detect significant abnormalities in persons presenting with a headache and a normal neurological exam. *Anticipated Completion: Summer 2010*

CURRENTLY UNDER REVIEW - CONTINUED

Peripheral Artery Stenting - This review will establish whether there is sufficient evidence on effectiveness and cost-effectiveness to support the use of stenting for treatment of peripheral artery disease in lower extremities. *Anticipated Completion: Summer 2010*

Percutaneous Vertebroplasty for Treatment of Painful Osteoporotic Vertebral Compression Fractures - This review will examine the treatment of vertebral compression fractures. *Anticipated Completion: Summer 2010*

Update on Primary Angioplasty - This review will encompass a review of recent studies that have been developed since the initial OHTAC review of September 2004. *Anticipated Completion: Summer 2010*

Update on Negative Pressure Wound Therapy - This review is undertaken in response to the development of new RCTs since the initial report on negative pressure wound therapy was published in July 2006. *Anticipated Completion: Summer 2010*

An Evaluation of Current Pharmacogenetic Tests across Three Cancers: Breast, Colorectal and Non-small Cell Lung - As pharmacogenetic testing is increasingly being used to predict response to new, targeted therapeutic strategies, these reviews will assess the efficacy and cost-effectiveness of several pharmacogenetic tests that are currently diffusing in Ontario. *Anticipated Completion: Summer 2010*

Endovascular Radiofrequency Ablation for Varicose Veins - The purpose of this analysis is to determine the safety and effectiveness of endovascular radiofrequency treatment for varicose veins. *Anticipated Completion: Summer 2010*

Diurnal Tension Curve for Intraocular Pressure Management - This review will examine the validity of this test for screening for glaucoma in selected populations and the test's clinical utility in a post diagnosis treatment situation. *Anticipated Completion: Fall 2010*

Da Vinci Robotic Surgical System for Gynecologic and Urologic Oncology - This review will examine the clinical effectiveness of a robotic surgical system to standard surgical techniques for gynecologic and urologic oncology. *Anticipated Completion: Fall 2010*

Study of Improving Multiple Infusion Line Safety - As requested by OHTAC, the Healthcare Human Factors Laboratories at the University Health Network is investigating the safety, effectiveness and usability of multiple line infusions. *Anticipated Completion: 2011*

As usual, OHTAC and MAS welcome your questions and comments. Please submit them to us at: OHTACinfo.moh@ontario.ca