

E-Bulletin

July 2005, Issue #4

The OHTAC E-bulletin is issued on a regular basis to provide you with updates on the latest committee recommendations. OHTAC has reviewed several health technologies and all its recommendations are available on the OHTAC Web site at http://www.health.gov.on.ca/english/providers/program/mas/ohtac_recommend.html.

Should you have additional information about any of these technologies, please submit it to the Medical Advisory Secretariat (MAS) at the contact information found at the end of this bulletin.

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OSTEOGENIC PROTEIN-1 FOR LONG BONE NONUNION

Issue

Approximately 5% to 10% of fractures do not heal and are classified as delayed or nonunion fractures. The technique of autologous bone grafting is generally considered the gold standard in the treatment of nonunions because bone graft has several components that are critical in bone regeneration. However, harvesting the autologous bone graft is associated with several complications. To overcome these complications, engineered materials that mimic at least one of the components of the autologous bone graft have been developed.

Osteogenic protein-1 (OP-1) is a growth factor, which is one of the components of the autologous bone graft. OHTAC was asked to conduct an evidence-based analysis of the effectiveness, cost-effectiveness, and safety of OP-1 for long bone nonunion. The analysis also located a number of studies that show another method, percutaneous autologous bone marrow grafting, is highly effective in the treatment of long bone nonunions.

Key Findings

- OP-1 is as effective as autologous bone grafting and offers the advantages of eliminating donor site morbidity and reducing the risk of infection at the recipient site.
- Percutaneous autologous bone marrow grafting is effective in the treatment of long bone nonunions in patients with no active infection at the fracture site.

**OHTAC
Recommendations**

- OP-1 is a reasonable alternative to autologous bone grafting in the treatment of long-bone nonunions and the decision to use it should be left to the discretion of treating physicians.
- The Ministry of Health and Long-Term Care seek the advice of Ontario clinical and academic experts regarding the appropriateness and feasibility of conducting research in Ontario into the effectiveness of autologous bone marrow as an alternative treatment for nonunion fractures.

Implications

More information is needed regarding the method of percutaneous autologous bone marrow grafting, which involves only aspiration and injection of bone marrow that could be performed under either local or general anesthesia.

The **OHTAC recommendation** for this technology can be found at the following link: http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/ohtac_rec_op1_051705.pdf

The full downloadable version of the **health technology and policy assessment (HTPA) report** by MAS can be found at: http://www.health.gov.on.ca/english/providers/program/mas/reviews/review_osteogenic_0705.html

OHTAC is envisaged as the first step in creating a single portal for providing advice to the Ministry of Health and Long-Term Care regarding the uptake, diffusion, and distribution for new health technologies. Find more about OHTAC, its application process, and its recommendations at the following Web site: http://www.health.gov.on.ca/english/providers/program/mas/ohtac_about.html.

MULTI-DETECTOR CT ANGIOGRAPHY FOR CORONARY ARTERY DISEASE

Issue	Compared to conventional CT scanners, multi-detector CT scanners (MDCT) are capable of obtaining narrower pieces of information at fast speeds, thereby filtering out the 'noise' that is often caused by movement. This capability expands the indications for CT in that moving body parts can now be visualized through CT, where this was not possible before. MDCT coronary angiography has been proposed as a minimally invasive replacement to coronary angiography to detect coronary artery disease. The focus of the assessment was on the safety, effectiveness, and cost-effectiveness of MDCT angiography compared with conventional coronary angiography in the diagnosis and management of people with coronary artery disease (CAD). It is not clear how MDCT will add to the clinical utility and management of patients for established CT indications.
Key Findings	Based on the review, MAS concluded that there is insufficient evidence to suggest that 16-slice or 64-slice CT angiography is equal to or better than coronary angiography to diagnose CAD in people with symptoms or to detect disease progression in patients who had previous cardiac interventions.
OHTAC Recommendations	• A field evaluation to determine the effectiveness, clinical utility and cost-effectiveness of 64-slice CT to diagnose CAD be undertaken, under the direction of the Program for Assessment of Technology in Health (PATH). • Request the University Health Network's (UHN) Usability Lab to test the use of 64-slice CT scanning under various circumstances and for various indications to determine how to best balance radiation dose, image quality and best patient management. The results of these testing parameters will form recommendations on the safe use of 64-slice CT for its various imaging uses, to be communicated to the Radiology community and hospital administrators in Ontario. • MOHLTC strike a consortium to develop a database of the indications for which multi-detector CT scanning is being used in Ontario and report back to OHTAC on the first six months of utilization. • MDCT should not be used for screening asymptomatic persons for CAD or other cardiac disease.
Implications	If MDCT scanners are used for unproven indications in Ontario, access to the current complement of CT scanners will necessarily increase wait times for general CT scanning. It is unlikely that these newer-generation scanners will improve patient throughput, despite the claim that they are faster.
Status Update	In response to the field evaluation recommendation, a multi-disciplinary research working group, chaired by a radiologist and a cardiologist, has been created to develop a research proposal to evaluate 64-slice CT angiography. In addition, the UHN Usability Lab has developed a proposal to address radiation dosage concerns for multi-slice CT and will begin their research shortly.

The **OHTAC recommendation** for this technology can be found at the following link:
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_multi_050805.pdf

The full downloadable version of the **health technology and policy assessment (HTPA) report** by MAS can be found at: http://www.health.gov.on.ca/english/providers/program/mas/reviews/review_multi_0505.html

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http://www.health.gov.on.ca/english/providers/program/mas/ohatc_about.html.

Upcoming Reviews

- Intrathecal pumps
- Hylan G-F 20
- Arthroscopic lavage, meniscectomy and/or debridement for osteoarthritis of the knee
- Multidisciplinary rehabilitation interventions for joint replacement for arthropathies
- Total knee replacement
- Plasmacluster Ion Air Purifier
- Cardiac resynchronization therapy
- Cardiac PET
- Imaging techniques for ischemic heart disease
- Endovascular repair of thoracic aneurysms using endografts
- Hyperbaric Oxygen

Previous OHTAC Recommendations

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| • Spinal Cord Stimulation for Neuropathic Pain
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/scs_0305.pdf | March 2005 |
| • Sacral Nerve Stimulation for Urinary Incontinence, Urgency-Frequency, Urinary Retention, and Fecal Incontinence
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/sns_0305.pdf | March 2005 |
| • Deep Brain Stimulation in Parkinson's Disease and Other Movement Disorders
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/dbs_0305.pdf | March 2005 |
| • Bariatric Surgery
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_baria_012105.pdf | January 2005 |
| • Vacuum Assisted Closure Therapy for Chronic Wounds
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_vac_121604.pdf | December 2004 |
| • Balloon Kyphoplasty
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_kypho_121604.pdf | December 2004 |
| • Thermal Balloon Endometrial Ablation for Dysfunctional Uterine Bleeding
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_tbea_091504.pdf | October 2004 |
| • Primary Angioplasty
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_pri_angio_110804.pdf | September 2004 |
| • Bispectral Index Monitor
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_bis_081304.pdf | August 2004 |
| • Radio Frequency Ablation for Primary Liver Cancer
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_rfa_061704.pdf | June 2004 |
| • Repetitive Transcranial Magnetic Stimulation for Major Depressive Disorder
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_rtms_061704.pdf | June 2004 |
| • Coil Embolization For Intracranial Aneurysms
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_ecc_0304.pdf | March 2004 |
| • Pyrocarbon Finger Joint Implant
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_pyrocarb_0304.pdf | March 2004 |
| • Video Laryngoscopy for Tracheal Intubation
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_vic_laryng_0304.pdf | March 2004 |
| • Bone Morphogenetic Proteins and Spinal Surgery for Degenerative Disc Disease
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_bmp_ddd_0304.pdf | March 2004 |
| • Artificial Discs for Cervical and Lumbar Spinal Surgery for Degenerative Disease
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_bmp_ddd_0304.pdf | March 2004 |
| • Computer-Assisted Hip and Knee Arthroplasty: Navigation and Robotic Systems
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_arthro_0304.pdf | March 2004 |
| • Computer-Assisted Surgery Using Telemicroscopes
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_telman_0304.pdf | March 2004 |
| • Tension-free Vaginal Tape for Stress Urinary Incontinence
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_tvt_050204.pdf | February 2004 |
| • Patient Monitoring System for MRI
http://www.health.gov.on.ca/english/providers/program/mas/reviews/docs/recommend_pmri_050204.pdf | February 2004 |

For any comments related to this E-bulletin, please contact the Medical Advisory Secretariat at:

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