Medtronic News

Medtronic Launches New Frontal Handpiece for Its Hydrodebrider(TM) System

Hydrodebrider System Offers Innovative Treatment for Chronic Sinusitis that Affects Nearly 30 Million US Adults1

MINNEAPOLIS, Apr 07, 2010 (BUSINESS WIRE) --Medtronic (NYSE: MDT) announced today the launch of a new Frontal Handpiece for its Hydrodebrider(TM) System, manufactured by the company's Ear Nose and Throat (ENT) division. The Hydrodebrider System is the first and only powered endoscopic irrigation system for removing bacteria from the paranasal sinuses. It is used for the treatment of chronic sinusitis, a disease that affects nearly 30 million US adults.1

The new frontal handpiece has a 2.2 mm diameter with fixed 80° articulation for access to the hard-to-reach frontal sinuses. Surgeons can connect the Hydrodebrider console to the Frontal Handpiece, the Standard Handpiece for maxillary, ethmoid and sphenoid sinuses, or both. Each handpiece delivers a rotating spray of pressurized saline at 5 mL/sec, enabling access for direct irrigation of sinus mucosal surfaces. *In vitro* research has demonstrated a 99% reduction in bacterial coverage in chronic sinusitis specimens treated with the Hydrodebrider System.2

"Endoscopic surgical access to the frontal sinuses is difficult because of narrow, complex anatomical features that necessitate the use of specialized instrumentation," said Bryan Jones, PhD, microbiologist and associate product manager for Rhinology in the ENT division at Medtronic. "The new Frontal Handpiece enables access for direct powered irrigation of the frontal sinuses, giving surgeons additional flexibility in the treatment of patients with chronic sinusitis."

Chronic sinusitis is defined as an inflammation of the tissues in the paranasal sinuses for at least 12 consecutive weeks in duration. When medical management fails, sinus surgery is employed to remove obstructions and diseased tissue with the goal of restoring normal mucociliary clearance in the paranasal sinuses. Despite numerous advances in techniques and instrumentation, between 10 to 25 percent of these surgeries have unfavorable outcomes, and patients are not cured of recurrent disease.3

Research increasingly indicates that bacterial infections are intimately associated with chronic sinusitis.4,5 Several studies have concluded that elimination of these bacterial infections through mechanical disruption is necessary to eradicate disease in patients with chronic sinusitis.4,5 Desrosiers et al found that the Hydrodebrider System was more effective at disrupting and removing bacteria than traditional saline lavage.2

About Medtronic's ENT Business Unit

Located in Jacksonville, Florida, the Ear Nose and Throat (ENT) division of Medtronic develops and manufactures products designed to treat ENT diseases. As the market leader in ENT, Medtronic is changing the way ENT surgery is performed with innovative, minimally invasive products and techniques that benefit both patients and surgeons. Main products include powered tissue-removal systems and other microendoscopy instruments, nerve monitoring systems, image-guided surgery systems, sleep-disordered breathing therapies, dissolvable nasal packing and a Ménière's disease therapy device. Learn more about the ENT business on the web at www.MedtronicENT.com. Learn more about the Hydrodebrider System at www.Hydrodebrider.com.

About Medtronic

Medtronic, Inc. (www.medtronic.com), headquartered in Minneapolis, is the global leader in medical technology - alleviating pain, restoring health, and extending life for millions of people around the world.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on

file with the Securities and Exchange Commission. Actual results may differ materially from anticipated results.

1. Benninger MS, et al. Adult chronic rhinosinusitis: definitions, diagnosis, epidemiology, and pathophysiology.*Otolaryngol Head Neck Surg* 2003; 129(3 Suppl): S1-32.

2. Desrosiers M, Myntti M, James G. Methods for removing bacterial biofilms: in vitro study using clinical chronic rhinosinusitis specimens. *Am J Rhinol* 2007; 21(5):527-32.

3. Hepworth EJ, et al. Nationwide survey on the use of image-guided functional endoscopic sinus surgery*Otolaryngol Head Neck Surg* 2006; 135(1): 68-73.

4. Jervis-Bardy J, Foreman A, Field J, Wormald PJ. Impaired mucosal healing and infection associated with Staphylococcus aureus after endoscopic sinus surgery. *Am J Rhinol Allergy* 2009; 23(5):549.

5. el-Fiky LM, Khamis N, Mostafa Bel D, Adly AM. Staphylococcal infection and toxin production in chronic rhinosinusitis.*Am J Rhinol Allergy* 2009; 23(3):264-7.

SOURCE: Medtronic, Inc.

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