

Surgery News

SPOTLIGHT ON VASCULAR AND ENDOVASCULAR SURGERY

Welcome to the first issue of Surgery News. Our mission is to provide first-rate, state-of-the-art quality care to all our patients. For more information about surgical services at Beth Israel Medical Center, please visit our Website at www.BISurgery.org or call (212)420-4044.

Endovascular Aortic Program



Jonathan Deitch, MD
Chief of Vascular and
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Atherosclerotic degeneration of the aorta can result in aneurysms that can affect the aorta from its origin, just beyond the heart, to its terminal portion in the pelvis. Aortic aneurysmal disease affects a significant proportion of the aged population and can have catastrophic consequences when undiagnosed. Early identification of those patients who have aneurysms has enabled elective repair prior to rupture with acceptable results even in those patients with significant comorbidities. One of the great advances in the field of vascular surgery over the past 12 years has been the ability to repair many of the abdominal aortic aneurysms (AAA) via a minimally-invasive endovascular procedure. More recently, select patients with aneurysms of the descending thoracic aorta have been treated by similar techniques. Once diagnosed,

specific anatomic measurements are acquired from CT scans and an operative strategy is planned. In approximately 85% of AAAs, an endovascular repair can be successfully accomplished through small, 3 cm groin incisions. Covered stents housed inside catheters are deployed under fluoroscopic guidance within the aortic aneurysm and ultimately reline the aorta. While avoiding abdominal or thoracic incisions, this has the great advantage of reducing hospital stay to 1-2 days following surgery. Patients experience minimal pain and are able to eat regular food the day after surgery. While a smaller percentage of patients with thoracic aortic aneurysms (TAA) have the anatomy that will enable them to undergo endovascular repair compared with those with AAA, the advantages to the patient in terms of pain and recovery are huge. The benefits are realized by a reduction in transfusion requirements and less deleterious effects on kidney, bowel and spinal cord function.

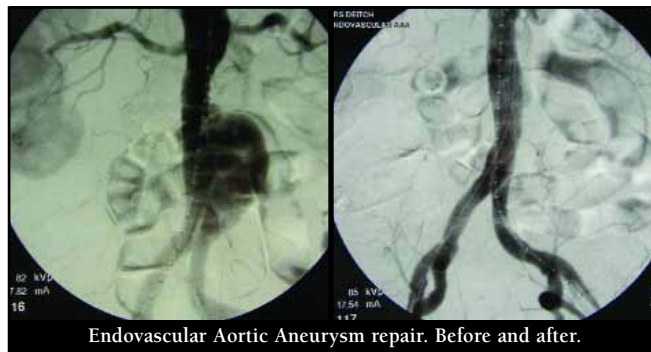
The Division of Vascular and Endovascular Surgery at Beth Israel Medical Center, under the leadership of **Jonathan Deitch, MD, FACS**, is now performing roughly 50 endovascular aortic aneurysm repairs per year with excellent overall results. This sophisticated technology has greatly changed the way in which Beth Israel vascular surgeons approach many of the patients with aortic pathology. Many elderly, infirm patients previously deemed unfit to undergo conventional repair

of their aneurysms and living life with a "time bomb" inside their abdomen or chest are now able to undergo expeditious repair and resume their normal quality of life.

Carotid Angioplasty and Stenting

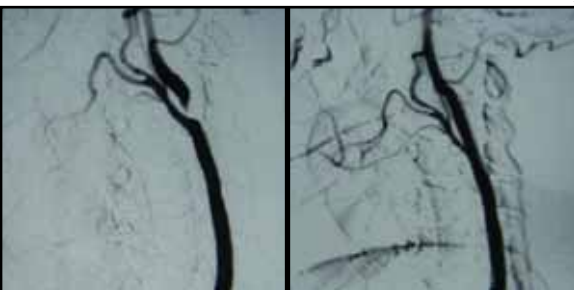
Strokes affect approximately 600,000 people in the United States per year and can be fatal in about one-third of patients and leave another one-third of patients with significant functional impairments. Up to 25% of patients with stroke have been found to have carotid artery bifurcation disease as the cause. For the past 40 years, carotid artery surgery has remained the mainstay of therapy for patients with severe carotid artery stenosis, and results of carotid endarterectomy (CEA), in terms of stroke prevention, has proved to be superior to medical management. Despite favorable results, a significant proportion of patients, roughly 10%-20%, are considered to be high-risk for undergoing surgical intervention and are denied the advantage of stroke prevention. Over the past several years, a few compelling studies have demonstrated superior results for these high-risk patients who have been treated with carotid angioplasty and stenting (CAS). Much of the improvement in outcomes from CAS procedures has been attributed to the

widespread application of embolic protection devices (EPD) which are small filter-like apparatuses placed in the distal carotid artery used to catch any debris liberated during the procedure. By using these protection devices during CAS procedures, periprocedural stroke risk has been reduced to rates similar to carotid



Endovascular Aortic Aneurysm repair. Before and after.

endarterectomy. Furthermore, for both symptomatic and asymptomatic patients, those undergoing carotid angioplasty and stenting by experienced practitioners using EPDs had a lower incidence of major adverse events (stroke, bleeding, myocardial infarction and death) compared with a similar high-risk cohort treated with CEA.



Carotid Angioplasty Stenting. Before and after.

The great advantage of the CAS procedure stems from the ability to perform the procedure under local anesthesia through a puncture in the femoral artery in the groin. Pain from incisions as well as bleeding and cranial nerve injury is non-existent. Durability and patency of the stents in the cervical carotid artery appear to be acceptable with a long-term risk of restenosis of less than

5%, which is almost equivalent to carotid endarterectomy. While the risk of procedural stroke remains similar to CEA, improved outcomes can be achieved by utilizing pre-procedural imaging modalities to enhance patient selection and reduce the likelihood of stroke. The vascular and endovascular surgeons at Beth Israel have enjoyed excellent results from CAS procedures which we feel is in part due to our selection process and in-depth pre-procedural case planning coupled with technical expertise. Several high-risk criteria are typically used to help guide physicians in the selection of those patients who are most appropriately considered for CAS procedures. Those should include the following anatomical or physiological features:

Either Asymptomatic carotid artery stenosis or Symptomatic carotid artery stenosis in the presence of one or more of the following risk factors:

- CHF Class III/IV
- LVEF < 30%
- Unstable angina
- Recent MI
- Severe COPD
- Contralateral occlusion of carotid artery

- Hi-lesions (past the angle of the mandible)
- Previous CEA with recurrent stenosis
- History or previous surgery for head and neck cancer
- Prior radiation treatment to neck

The Division of Vascular and Endovascular Surgery at Beth Israel Medical Center, under the leadership of **Jonathan Deitch, MD, FACS**, is now routinely evaluating patients with cervical carotid disease for both carotid endarterectomy as well as carotid angioplasty and stenting procedures. With over four years of experience in the performance of these technically demanding procedures, **Dr. Deitch** and his colleagues are all fully credentialed and competent at the CAS procedure.

For more information: Beth Israel surgeons evaluate each and every patient and collaborate with referring physicians to create with an individualized treatment plan. For more information or to refer a patient, please call (212) 844-5555. A consultation can be scheduled with **Dr. Deitch** or one of his credentialed colleagues. You can also visit our Website at www.BISurgery.org