Spine Intervention: Kyphoplasty

Kyphoplasty is an alternative approach for treating painful compression fractures. With kyphoplasty, a slightly larger needle is inserted into a vertebral body and under careful X-ray guidance place small balloons are directed into the bone. The balloons are then inflated in small increments until certain endpoints are reached. The balloons are then deflated and removed. The acrylic bone cement is then placed into the spaces created by the balloons. With kyphoplasty, patients are more often treated under general anesthesia and may stay overnight in the hospital.

(A) MRI of this patient showed edema in the T12 vertebral body consistent with acute compression fracture.
(B,C) Flourscopic images from the kyphoplasty show the needle position in the AP view along the upper outer margin of the pedicle of the T12 vertebral body. Lateral views show the balloon devices are inserted and then expanded to recreate the height of the vertebral body. These are deflated and methylmethacrylate is delivered into the space to support the bone.
(D,E) The lateral and AP views show the final bone cement in place within the T12 vertebral body

The Neurovascular Service at Massachusetts General Hospital provides a multidisciplinary approach to patient care that combines neurosurgery, neurology and interventional neuroradiology. Based in the Department of Radiology, the Neurovascular Service’s Interventional Neuroradiology Program uses minimally invasive procedures to treat a range of neurovascular disease and spinal disorders. For more information, visit www.mgh-interventional-neurad.org