

Hospitals Testing New Procedures for Lung Disease without Major Surgery

The *Wall Street Journal* reported April 14, that more than two dozen U.S. medical centers are testing a less-invasive new procedure to help patients with lung disease.

Some 15 million Americans have been diagnosed with COPD (short for Chronic Obstructive Pulmonary Disease), a lung disease caused mainly by smoking that includes chronic bronchitis and emphysema. Over time, this disease makes it hard to breathe. Currently, it is the third leading cause of death in the United States behind heart disease and cancer.

The *Journal* article says that some patients with severe cases of COPD may undergo surgery, during which the diseased part of the lung is removed, but that this procedure is risky and costly partly because recovery is long and many patients experience complications after surgery.

According to the *Journal* story by Laura Landro hospitals are “testing a technique that places metal coils into the lung using special scopes inserted through the mouth or nose. Once in place, the coils compress the diseased tissue and allow the healthier parts of the lung to breathe more freely.”

The report cites Atul C. Mehta, an interventional pulmonologist at Cleveland Clinic, one of the centers participating in the trial: “If successful, we will be able to help a significant number of patients have an improved quality of life and potentially improve survival in a noninvasive manner.”

The story notes that the coils have been approved for use in Europe since 2008, and studies have shown the treatment is safe for patients, resulting in significant improvements in pulmonary function, exercise capacity and quality of life. PneumRx Inc., the manufacturer of the coils is funding the U.S. research.

According to the PneumRx website (www.pneumrx.com), the coils are programmed with shape memory, meaning that after being straightened for insertion into the lung, they gather up and compress the diseased lung tissue surrounding them as they return to their original shape, improving lung function in three ways:

- ♦ The coils compress diseased tissue, which provides room for healthier tissue to function;
- ♦ The coils retention adjacent parenchyma, helping to restore the lung’s natural elasticity, which enables the lung to more efficiently contract during the breathing cycle;
- ♦ The coils tether open small airways, preventing airway collapse during exhalation, which reduces air trapping and hyperinflation. ■



X-ray showing a patient’s lungs after coil treatment.

Photo credit: Dr. Gerard Criner, Temple University