AlphaNet

What Are Endobronchial Valves?

What Are Endobronchial Valves? How Do They Work?

- ✓ Endobronchial valves (EBV) are small metallic devices inserted into the lungs with a bronchoscope (lighted flexible scope) in order to produce a smaller lung size.
- ✓ The valves are inserted into lobes of the lung that are too large (hyperinflated) due to emphysema (holes in the lung that hold trapped air).
- ✓ Hyperinflation leads to shortness of breath because the lungs that are too large flatten the diaphragms (muscles of breathing that separate the lungs from the abdomen).
- ✓ EBV treatment allows the trapped air to escape and makes the lobes that were hyperinflated smaller.
- ✓ EBV treatment creates more room for healthier parts of the lung to expand and function better.
- ✓ There are currently two brands of EBVs approved by the FDA: Zephyr and Spiration.

Who Is Eligible for Endobronchial Valves?

- ✓ Eligible individuals have advanced emphysema and lung hyperinflation.
- ✓ Tests that are used to determine eligibility include a pulmonary function test, CT scan, six-minute walk test, and blood test. It is estimated that 10% of the most severely affected Alphas are eligible.
- ✓ To be eligible, individuals must have a complete fissure between the lung lobes.
- ✓ A fissure is where the tissue enclosing each lung lobe meets.
- ✓ About half of us are born with incomplete fissures, allowing air to move from one lobe to another. EBV treatment can worsen shortness of breath among people with incomplete fissures.
- ✓ Among people with complete fissures, 70% - 80% have less shortness of breath after EBV treatment.
- ✓ Work with your healthcare provider to determine whether EBV treatment is appropriate for you.

What Does the Procedure Involve?

- ✓ The procedure is minimally invasive. It does not involve any incisions.
- ✓ Anesthesia or sedation is used for the procedure.
- ✓ A lighted scope that passes from the mouth into the lungs (called a bronchoscope) is used to insert the valves into the lungs.
- ✓ The valves are placed in airways that lead to areas of the lung that have emphysema.
- ✓ All of the valves are usually placed in less than 1 hour.
- ✓ The procedure is followed by a 1 - 3 day hospitalization.
- ✓ The procedure is done at selected centers in the US.
- ✓ The valves can be removed if there is not a good treatment response.

What are the Possible Risks?

- ✓ As with any medical procedure, there are risks.
- ✓ Risks include:
  - ❑ Pneumothorax (collapsed lung) in about 30% of people
  - ❑ Infection
  - ❑ Bleeding
  - ❑ Failure to improve respiratory status
  - ❑ Death, in rare instances

What are the Possible Benefits?

- ✓ EBV treatment can improve:
  - ❑ Shortness of breath
  - ❑ Exercise capacity and quality of life
  - ❑ Lung function
- ✓ After EBV treatment, improvements are usually noticeable within a few weeks.
- ✓ There are websites with videos that give more information and list treating centers.