Bronchial Thermoplasty: A Novel Approach to Asthma Treatment

Madam, Bronchial Thermoplasty is a novel approach aimed at alleviating the painful symptoms associated with asthma. Bronchial Thermoplasty is done using the Alair® system which consists of a single catheter and a controller that delivers radio frequency energy to apply controlled heat on the smooth muscles of the airway to relieve asthma symptoms.[1] As the procedure requires only light anaesthesia, it can be performed on an outpatient basis. A small, flexible tube called a bronchoscope is inserted through the nose or mouth and guided into the lungs and then into the airway on which Bronchial Thermoplasty is to be performed. After placing a bronchoscope in the desired airway, an Alair® catheter is inserted through the bronchoscope. This catheter has an expandable wire basket with four arms that securely fit against the airway wall. Consequently the tip of the catheter is inflated until it touches the sides of the airway wall. Radio frequency energy is then sent through the catheter, heating the smooth muscle walls of the airway to approximately 65°C (149°F) for a period of 10 seconds.[2] Studies in animals[2] and humans[3] have shown that this temperature is sufficient to reduce the smooth muscle mass in the airway wall while it can also result in epithelial damage which usually resolves over time.

Clinical trials carried out by Mcmaster physicians Dr. Gerard Cox and Dr. John Miller are very promising. Initially 16 patients who suffered from mild to moderate asthma underwent Bronchial Thermoplasty after which they were assessed at 12 weeks, 2 months and 2 years following treatment.[4] Participants underwent three thirty-minute sessions treating all accessible airways.

All in all, Bronchial Thermoplasty has certainly added a new chapter in asthma treatment; while it is not intended to serve as a cure it will certainly complement conventional treatment.

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References

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