Practical Approach to Interventional Bronchoscopy: Procedural Decision Making:
Scenario #2: Tracheobronchial aspergillosis with tuberculosis tracheal stenosis

Based on the information presented below, please describe your procedural decision making using The Practical Approach to Interventional Bronchoscopy. Do your best to complete each item of the Four Boxes. If the case scenario contains no information pertaining to an item, please address it as Not Available. Note that each case scenario may have greater emphasis on one or more items listed in the “Practical Approach”. You may choose to study one or more issues in greater depth, and should attempt to justify your opinions using peer reviewed literature and selected references.

BB is a 55-year-old female presented with productive cough and new onset of fever, dyspnea and chest pain. She had a history of pulmonary tuberculosis 35 years prior and was treated with antituberculous medications for 2 years. Post-tuberculosis tracheal stenosis was diagnosed 10 years ago and was treated with laser and dilation. Patient has been on inhaled fluticasone twice daily for several years. She had bilateral wheezes and stridor on neck auscultation. White blood cell count was 7,600 cells/μl, with 91% neutrophils. Chest radiograph and computed tomography scan showed narrowing of the airway in the mid trachea. She also had a collapsed right upper lobe and mid tracheal stenosis of 7 mm diameter. Flexible bronchoscopy showed white pseudomembranes covering the vocal cords and the entire trachea to the carina, extending down the posterior membrane of the left main bronchus. There was circumferential narrowing of the mid trachea to 7 mm. The right upper lobe bronchus was closed from old TB. Biopsy of pseudomembranes revealed Aspergillus. The patient is single and travels widely. She wants to return to work as soon as possible.

After addressing items of the four boxes, briefly respond to the following questions:
1. Describe the various airway findings of tracheobronchial aspergillosis.
2. Identify advantages and disadvantages of airway stent insertion in patients with tracheal stenosis and active airway infections.
3. Describe the various medical treatment modalities for Trachealbronchial aspergillus infection.
### Initial Evaluation

1. Physical examination, complementary tests, and functional status assessment
2. Patient’s significant co-morbidities
3. Patient’s support system (also includes family)
4. Patient preferences and expectations (also includes family)

### Procedural Strategies

1. Indications, contraindications, and expected results
2. Operator and team experience and expertise
3. Risk-benefits analysis and therapeutic alternatives
4. Respect for persons (Informed Consent)

### Procedural Techniques and Results

1. Anesthesia and other perioperative care
2. Techniques and instrumentation
3. Anatomic dangers and other risks
4. Results and procedure-related complications

### Long term Management Plan

1. Outcome assessment
2. Follow-up tests, visits, and procedures
3. Referrals to medical, surgical, or palliative/end of life subspecialty care
4. Quality improvement and team evaluation of clinical encounter