Complexities in Managing Malignant Pulmonary Artery Stenosis: Difficult Decisions in a Patient with Prior Pneumonectomy

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Disclosure

Speaker name: Clayton Brittingham

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

I do not have any potential conflict of interest
Case

• 60-year-old caucasian female presenting with **acute** shortness of breath, exertional dyspnea, and hemoptysis

• PMHx: Stage IIa squamous cell carcinoma status post left pneumonectomy
Brain Natriuretic Peptide (BNP)
• 14 DEC 2016: 325 pg/mL
• 30 JAN 2017: 9270 pg/mL

Transthoracic Echocardiogram
• 14 DEC 2016:
  1) PA systolic pressure, 28.4 mmHg
• 01 FEB 2017:
  1) Right atrial and ventricular enlargement
  2) PA systolic pressure, 89.3 mmHg
Intervention

- Patient deemed an adequate candidate for radiation therapy
  - However, pre-treatment stent needed to prevent occlusive swelling
Stent Selection
Anticoagulation

- No significant literature covering this topic

- High flow through the pulmonary artery should prevent thrombus formation without anticoagulation

- However, stent failure would be fatal to the patient
Follow Up

• Patient did well over the next week during her stay in the intensive care unit

• Reported a “90%” improvement in her shortness of breath
Pre Stent (13%)

Post Stent (11%)
Radiation Therapy

• Day 6 :
  • First radiation treatment

• Day 7 :
  • Acute respiratory failure

• Bedside bronchoscopy:
  • Diffuse tissue breakdown
  • Tumor invasion
  • Small airway hemorrhage (oozing)

• Day 9 – Family withdrew care
Discussion

- Stenting of malignant pulmonary artery stenosis is a highly complex procedure that presents a variety of unique challenges.

- Pulmonary artery stents are effective in the urgent and palliative treatment of malignant pulmonary artery stenosis.

- A multidisciplinary approach is paramount to appropriately manage these patients.
References


Questions

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