METEORITE SHOWERS IN THE LUNGS!

SUDHA SADUVALA MD; KRISHNA VR VENKATA MD; SYED HASAN MD; JEWELL H HALANYCH MD, PRIYANKA VYAS MD

UNIVERSITY OF ALABAMA AT BIRMINGHAM, MONTGOMERY INTERNAL MEDICINE RESIDENCY PROGRAM, 2055 E SOUTH BLVD, SUITE 200, MONTGOMERY, ALABAMA-36116
HISTORY

• A 57 year old white woman with past medical history:
  • Stage 4 adenocarcinoma of the lung s/p resection and chemotherapy
  • COPD
  • Kyphoplasty of fractured L3-L4

• Presented with
  • SOB and Dyspnea on exertion for 6 weeks
  • Pleuritic chest pain for 2 weeks
PHYSICAL EXAMINATION

- Vital signs: within normal limits
- Physical examination: normal except, diminished breath sounds at bases
WORKUP

• Labs:
  • CBC normal
  • BMP normal
  • ABG normal
PULMONARY CEMENT EMBOLIZATION (PCE)
FLOUROSCOPY
PCE

- PCE is an infrequent but serious complication of vertebroplasty (VP) and kyphoplasty (KP) procedures
- PCE has an incidence of about 2.1 to 26% after these procedures
VP AND KP

- Osteoporotic fractures
- Burst fractures
- Fractures secondary to tumors
PCE

- Cement leakage from the vertebral body into the vertebral venous plexus occurs probably when the cement is still in the liquid phase or
- excess pressure is applied during injection
Most cases are asymptomatic, clinical features include:

- Shortness of breath,
- Palpitations
- Chest pain
- Cough
- Hemoptysis
- Syncope
- Dizziness
DIAGNOSIS

• Clinical symptoms
• Chest X ray
• Chest CT angiogram.
• High density material in the pulmonary arteries
GUIDELINES

- There are no guidelines available for management of PCE
- Management mainly depends on symptoms and location of the cement embolization
PULMONARY CEMENT EMBOLIZATION

Pulmonary central arteries

Asymptomatic
- No treatment Required
- Symptomatic treatment
- Follow chest radiograph

Symptomatic
- Anticoagulation is recommended
- Follow-up CXR
- Pulmonology follow-up

Asymptomatic
- Recommends Anticoagulation
- Follow-up CXR
- Close Pulmonology follow-up

Symptomatic
- Anticoagulation
- Surgical removal

Pulmonary peripheral arteries
• Ibuprofen 800 mg TID
• No Anticoagulation
• Symptoms resolved in two days
• The patient was discharged with pulmonary follow up
TAKEAWAY POINTS

- Pulmonary cement embolism is a well-recognized complication after kyphoplasty and vertebroplasty procedures.

- Emphasis on recognizing symptoms and getting chest radiograph after the procedures is helpful in preventing serious complications.
REFERENCES

- C.M.B González, Cement Pulmonary Embolism, Radiology Department, Hospital General Universitario Morales Meseguer, Murcia, Spain, August, 2016
QUESTIONS?