CASE REPORT

Cryptogenic organising pneumonia after radiotherapy

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SUMMARY

A patient with cryptogenic organising pneumonia after radiotherapy in the thorax was dramatically dissolved by administration of corticosteroid.

BACKGROUND

Radiation pneumonitis was one of the serious adverse events after thoracic radiotherapy. Some cases get confused between radiation pneumonitis and cryptogenic organising pneumonia.

CASE PRESENTATION

A 59-year-old-woman with ovarian cancer was admitted to the hospital with non-productive cough and general fatigue. Four months before admission, she underwent radiotherapy, a dose of 74 Gy was given in 37 fractions to mediastinum lymph node metastases. The chest X-ray showed an infiltrated shadow at the right lower lobe, which was near to but outside of the irradiated field. The thoracic CT scan disclosed consolidation at the upper segment of the lower lobe (figure 1). On laboratory test, the white cell count was 6800/ μ mL with left side differentiation and C reactive protein (CRP) was 10.3 mg/dL. She was administrated ampicillin and a sulbactam dose of 6 g. However, the elevated CRP level and abnormal shadow in the chest X-ray did not dissolve.

A transbronchial lung biopsy was performed and bronchoalveolar lavage was obtained. No

Figure 2 A transbronchial lung biopsy showed intra-alveolar buds of granulation tissue, intermixed myofibroblasts and connective tissue, which was consistent with cryptogenic organising pneumonia.

microorganisms could be found. Histological examination showed intra-alveolar buds of granulation tissue, intermixed myofibroblasts and connective tissue, which was consistent with cryptogenic organising pneumonia (figure 2). A prednisone dose of 30 mg was administrated. Dyspnea, general fatigue and elevated CRP was dramatically dissolved.

OUTCOME AND FOLLOW-UP

12 days after initiation of prednisone, thoracic CT disclosed there no fibrotic change after infiltrated shadow (figure 3). She was well after prednisone was tapered.

Figure 1 A thoracic CT scan showed an infiltrating shadow in the upper segment of the right lower lobe, which was near to but outside the irradiated volume.

Figure 3 After a prednisone dose of 30 mg was administrated, the infiltrated shadow in thoracic CT and her clinical symptom dramatically dissolved.

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Learning points

- ▶ Cryptogenic organising pneumonia (COP) occurs near the irradiated volume after radiotherapy.
- ▶ The symptom and infiltrating shadow on the chest X-ray was dramatically improved by administration of corticosteroids.
- ▶ The diagnostic distinction between radiation pneumonitis and COP was important because patients with COP have a good response to corticosteroids and a favourable prognosis.

DISCUSSION

There were some reports of cryptogenic organising pneumonia after irradiation of the breast; however, there are few reports of COP after having done radiation therapy in the chest. When the infiltrating shadow outside the irradiated volume presents, COP should be included in differential diagnoses.

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