Pulmonary toxicity is a frequent side effect of anticancer treatment. The clinical pictures vary from drug to drug including acute or sub-acute pneumonitis, interstitial lung disease, organized pneumonia, pulmonary fibrosis, pulmonary embolism and pulmonary hypertension, bronchial disease including asthma and cough, and pleural effusion. Drug-related complications are difficult to distinguish from infectious disease and from cancer spread into the lungs. Chest computed tomography, bronchoscopy with bronchial biopsies, microbial specimens and broncho-alveolar lavage usually rule out infectious disease left heart failure and cancer lung involvement. The diagnosis of drug-related pulmonary disease is then often suspected in the absence of other cause, and confirmed by the clinical and radiological picture and in rare cases by specific findings on broncho-alveolar lavage or lung biopsy.

Pulmonary embolism represents a frequent complication of anticancer therapies. Although pulmonary embolism can be ascribed to the cancer and to underlying risk factors, several lines of arguments suggest that some anticancer therapies are linked to venous thromboembolism. This is the case for surgery and hormonal treatment but chemotherapy has also been associated with activation of the coagulation system and most of the venous thromboembolic events occur during the periods of chemotherapy. Epidemiological data also suggest that radiotherapy, erythropoietin and blood transfusion are associated with venous thromboembolism. The association with bevacizumab is more controversial. Diagnosing pulmonary embolism in patients with cancer is not easy because most of the symptoms are not specific and are most often limited to fatigue, dyspnea and vague chest pain which are common symptoms in patients with cancer. This is probably the reason why a significant number of pulmonary embolisms are diagnosed incidentally in cancer patients on a computed chest tomography performed for another reason. Increased awareness of oncologists about pulmonary embolism and a reduced threshold for clinical suspicion may reduce the morbidity of pulmonary embolism in patients with cancer.

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