Introduction and purpose

Chronic pulmonary aspergillosis (CPA) is a rare, potentially severe disease that affects subjects with moderate immunosuppression and/or structural alterations in the lung. These risk factors are often present in patients with cancer, making them susceptible to this particular kind of infection. The aim of this study was to describe the features of CPA in patients with a history of cancer in a retrospective cohort of patients with CPA.

Methods

A retrospective cohort study of all patients diagnosed with CPA between 2010 and 2015 in a tertiary hospital in Spain was conducted. Cases were identified through the Microbiology and Infectious Diseases registries. Patients were included if they met the diagnostic criteria for CPA as reported on the recently published CPA guidelines (Denning DW, Eur Respir J 2016). Patients were followed up until death or loss to follow-up or until June 2016. Relation of death with CPA was assessed according to previously described criteria (see Table 1). Patients with active cancer or a history of localized lung cancer who had achieved a complete response after treatment were classified as having cancer-related CPA.

Results

Figure 1. Patient inclusion flowchart

- Most frequent types of CPA were chronic cavitary pulmonary aspergillosis (CPA, 9 cases) and chronic necrotizing pulmonary aspergillosis (CNPA/SAIA; 7). Severity of the infection was very heterogeneous.
- Aspergillus fumigatus, identified in 17 cases, was the most frequently involved species.
- Treatment was tailored to every patient according to clinical situation. Eighteen patients received antifungal treatment. Voriconazole was the initial treatment in 13, in 3 cases given in combination with a second antifungal agent; four patients received itraconazole and one intravenous liposomal amphotericin B.
- Eleven patients died while receiving antifungal treatment for a median of 4 weeks (IQR 2-13). The other 7 patients were alive at the end of antifungal treatment and received a median of 12 weeks of treatment (IQR 8-39). Seven patients did not receive antifungal treatment; 5 of them were on palliative care, 1 was diagnosed as having simple aspergillosis and 1 in diagnosis was post-mortem.
- Mortality at 12 months after diagnosis of CPA was high at 84% (21/25 patients), although the majority of the deaths were considered to be secondary to underlying diseases.

Table 1. Mortality and its relationship with CPA

- Our results provide data on clinical characteristics and outcomes of cancer-related CPA. CPA can appear at any stage of the neoplastic disease; nevertheless, in most patients it presented in late stages.
- Mortality was very high despite antifungal treatment, although only in 35% of cases CPA-related. CPA may represent a marker of poor prognosis in patients with a history of cancer.
- The presence of Aspergillus in the respiratory airway of a cancer patient should raise suspicion of CPA and motivate a diagnostic procedure.

References

- Garcia-Vidal C, Juan Aguilar-Company J, Isabel Ruiz-Camps M, Maite Martin M, Julita Sampol M, Maddalenia Peghin E, Enriqueta Felip J, Jordi Andreu B, Benito Almirante B. Cancer-Related Chronic Pulmonary Aspergillosis: Experience in a Tertiary Care Center. e-mail: juanaguilarcompany@gmail.com
- Table 3. Cumulative mortality

Conclusions

- Table 3. Mortality and its relationship with CPA

- Adapted from Garcia-Vidal C, FLOOS ONE 2015