AA amyloidosis associated with cancers

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ABSTRACT

AA amyloidosis commonly results from chronic inflammatory conditions. Data on cancer associated AA amyloidosis is lacking.

We performed a descriptive systematic analysis of AA amyloidosis associated with cancers and its treatment. PubMed database was searched for English language literature using keywords- localized AA amyloidosis, systemic AA amyloidosis, cancer, solid cancer, carcinoma, malignancy, hematological malignancy, leukemia, lymphoma, tumors, cancer chemotherapy, cancer immunotherapy, and cancer drugs.

Only case reports and case series were identified. A total of 52 case reports and 3 case series with adequate information were included and a summary of the findings is provided. In two autopsy series evaluating AA amyloidosis, 13 and 7 cases had solid cancers. Renal cell cancer (RCC) was noted in 45.5% and 25% of these cases, the most common solid cancer associated with AA amyloidosis. In addition, 20 clinical cases of RCC were reported to be associated with AA amyloidosis. All of these were localized renal tumors, except 1 case with metastatic disease. Clear cell carcinoma was the most common histology of RCC associated with AA amyloidosis. There were case reports (1 or more) describing other solid cancers with AA amyloidosis like- lung cancer (6), gastrointestinal stromal tumors with high mitotic activity (2), sarcoma (2), uterine leiomyosarcoma (1), bladder carcinoma (2), ovarian carcinoma (1), and basal cell carcinoma of skin (3). Patients with solid cancers and AA amyloidosis frequently presented with nephrotic syndrome and kidney dysfunction rather than symptoms from the tumor directly. Among hematological malignancies, 12 cases of clonal B-cell/plasma cell dyscrasia, 5 cases of lymphoma, 1 case of chronic myeloid leukemia, and 1 case of chronic lymphocytic lymphoma were reported to be associated with AA amyloidosis. Three cases were identified to have immune checkpoint inhibitors, associated AA amyloidosis

AA amyloidosis can be associated with underlying solid cancers, hematological cancers, and immunotherapy. AA amyloidosis should be considered in the differential diagnosis for nephrotic syndrome with or without kidney dysfunction in patients with cancers.