Clinical studies of cerebral infarction in our cancer patients

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Introduction

It is well known that cerebral infarction occurs frequently in cancer patients and the mechanisms are various. However, there is not so much epidemiological data and no guideline for diagnosis and treatment, so we often have difficulty to perform clinical medication.

Methods

To assess the incidence and type of cerebral infarction in patients with cancer, the hospitalized active cancer patients who experienced acute cerebral infarction from January 2014 to December 2016 in Tokyo Metropolitan Komagome Hospital were collected and clinical data were analyzed retrospectively.

Results

Patient characteristics

Acute cerebral infarction was diagnosed in 76 patients with cancer and 98 without cancer.

- Patients with cancer, n=76
  - Gender: men 46 (60.5%), women 30 (45.9%)
  - Age: mean 72.6y, range 30-94y
  - Patients without cancer, n=98
  - Gender: men 46 (46.9%), women 30 (39.5%)
  - Age: mean 71.3y, range 30-100y

Primary cancer and stage of cancer

Lung cancer (19(25%)) was the most common primary cancer followed by colon (9(10.5%), pancreas and esophagus cancer (6(7.9%) each), and 58(77%) were Stage IV.

Mechanism of cerebral infarction and treatment

57(75%) infarctions were embolic and 19(25%) were nonembolic in patients with cancer, whereas 11(11%) were embolic and 87(89%) were nonembolic in those without cancer. In 41 embolic infarctions with cancer, cancer-related coagulopathy (Trousseau syndrome) was considered as etiology. 39/41(95%) cases were nonembolic in those without cancer. In 41 embolic infarctions with cancer, whereas 11(11%) were embolic and 58(77%) were Stage IV.

Fibrinolytic marker

D-dimer were tested in 35/41 cases considered Trousseau syndrome. In 35 cases D-dimer was elevated and exceeded 10μg/ml in 21/35(60%) cases.

Fig. D-dimer level by etiology of cerebral infarction

Prognosis

No antithrombotic therapy was related coagulopathy (Trousseau synd. s/o) in 33/76(43%) cases with cancer because of the poor prognosis of cancer.

Tumor markers

CA125 was high in 18/20(90%) cases considered Trousseau syndrome, CA19-9 in 18/23(78.3%) and CEA in 22/35(62.9%). CA125 and CA19-9 were dominantly high in many cases considered Trousseau syndrome compared with other etiologies.

There was no correlation between tumor markers (CA125, CA19-9, CEA) and D-dimer.

Conclusions

Embolism was the commonest mechanism of cerebral infarction in patients with cancer, due primarily to hypercoagulability. It is said that elevated CA125 and CA19-9 levels may correlate with the degree of hypercoagulability, but the correlation between tumor markers and D-dimer level was not found in this study.

References