New Concept For The Linkage Between Chemotherapy And Strokes: The Edgar Allan Poe Effect

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Conflict of interest
• None

Story of a 30 yo woman
• 1st stroke in left MCA territory in August 7, 2015
• Stroke occurred in a context of recent breast cancer

MRA and cardiac explorations were normal

Diagnosis of neurologist was acquired coagulopathy
• Because her spontaneous ACT was slightly elongated
• LW heparin as initiated
• 2nd stroke in same territory by August 15
• 3rd stroke by Sept 7, during a session of chemotherapy

DWI after the third episode showed multiple small infarct in left MCA territory
Her medical treatment was increased

- LW Heparin plus Aspirin
- October 10: she did a new stroke (4th) with same symptoms (aphasia & right hemiparesis)
- Bibliography was done by neurologists about stroke and chemotherapy
- Conclusion was « cerebral vasculopathy under chemotherapy »

Between October 2015 and April 2016

- She did three additional strokes always in the same territory (7 in total)
- Her medical file was presented to my department for a possible conventional angiography looking for a cerebral vasoconstriction
- Angio CT was first performed…

But, where is her chemo port?

In the left CCA instead of the left jugular vein (the chemotherapy has been delivered intra-arterially)

Catheter was surgically retrieved

- Persistence of a small parietal thrombus justifying the continuation of anticoagulants during 3 weeks
- No further strokes occurred after this surgery

1st conclusion: as soon as a foreign body is present, angio CT is superior to MRA
2° conclusion: the Edgar Allan Poe effect i.e. we ignore the most visible things just because of their obviousness

Because during her first hospitalization this malposition was already visible on the thoracic CT done to search a metastatic extension

And because none of the article about stroke and chemotherapy has mentioned any exploration of the port in those patients even when facing an obvious territorial infarct

On the other hand, reported incidence of stroke during chemotherapy is 0.14%
  • 0.14% is a percentage that is concordant with the failure rate of any vascular intervention
  • “Post-chemotherapy vasculopathy” is a myth
  • If you face such a story, remember Edgar Allan Poe and answer: “show me where is the port, we will talk about small vessel disease afterwards…”

Thank you for your attention