This case highlights the importance of the evaluation and management of potential complications from STEMI. While initially treated for a STEMI, patient's presentation and course represent the hemodynamic sequelae of embolized thrombus in the setting of a structurally abnormal heart. The first event was likely a pulmonary embolism which created a right to left shunt (Video B) and allowed for additional clot to traverse the structural abnormality.

This hemodynamic change resulted in patient's altered mental status at the time of presentation (stroke) and STEMI (embolism).

While patient was appropriately treated for his STEMI, application of type II reasoning and imaging allowed providers to avoid confirmation bias and representor restraint especially given his complicated course.

Cognitive Biases in Medicine:

- Studies have established a “dual process” model of thinking and reasoning which proposes Type I and Type II processes. ¹
  - Type I processes are fast reflexive, intuitive, and may operate on a subconscious level
  - Type II processes are analytic, slow, and deliberative – which requires focused attention
- In this case, patient’s initial presentation as a middle-aged male with a smoking history and lack of medical follow up initially framed the case as single pathophysiologic process.
- Type II reasoning however prevented following biases:
  - Confirmation bias: the seeking or interpreting of evidence in ways that are partial to existing beliefs, expectations, or a hypothesis in hand ²
  - Representative restraint: prototypical manifestations of a disease (pattern recognition) leads to a failure to recognize atypical variants ³

REFERENCES

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