Cancer-related microangiopathic haemolytic anaemia

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DESCRIPTION

A 71-year-old woman with widely metastatic breast cancer to liver and bone marrow presented with 2 weeks of fatigue. Examination revealed a severely ill-appearing woman in moderate distress with icterus and jaundice. Laboratory investigations revealed profound anaemia (haemoglobin 5.2 g/dL) with appropriate reticulocyte response (14.4%) and a normal platelet count ($207 \times 10^9/L$). Additional tests revealed a lactate dehydrogenase of 2997 IU/L (normal: 140–297 IU/L), negative direct Coombs anti-globulin, an undetectable haptoglobin level, elevated total bilirubin, newly elevated prothrombin time (19.7s, normal: <14.1s), elevated fibrin split products and D-dimer (14.36 µg/dL, normal: <0.53 µg/dL) but normal fibrinogen level (322 mg/dL, normal:

Learning points

- ▶ Cancer-associated microangiopathic haemolytic anaemia (CR-MAHA) is a type of thrombotic microangiopathy that can occur in any solid malignancy including breast cancer.
- ▶ CR-MAHA is most commonly associated with gastric cancer, followed by breast, prostate and lung cancers.

193–488 mg/dL). Peripheral blood smear revealed marked schistocytosis (figure 1) with normal platelet count. The patient was diagnosed with cancer-associated microangiopathic haemolytic anaemia^{1 2} with laboratory evidence of disseminated intravascular coagulation, and she passed away on comfort measures 24 hours after admission.

Contributors AAD, SN and DF were involved in patient care and writing of the manuscript. NT was involved in the editing of the manuscript.

Competing interests None declared.

Patient consent Guardian consent obtained.

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REFERENCES

- 1 Govind Babu K, Bhat GR. Cancer-associated thrombotic microangiopathy. *Eancermedalscience* 2016;10.
- 2 Takabatake D, Oishi K. Microangiopathic hemolytic anemia associated with metastatic breast cancer: case report and literature review. *Springerplus* 2016;5.

Figure 1 Arrows showing marked schistocytes.

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