

Clinical update no. 546

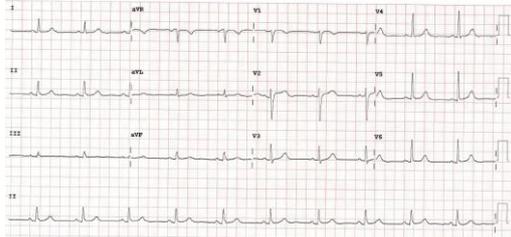
2 October 2019

THE ECG WILL SHOW ISCHAEMIA -

IT WON'T SHOW THE CAUSE.

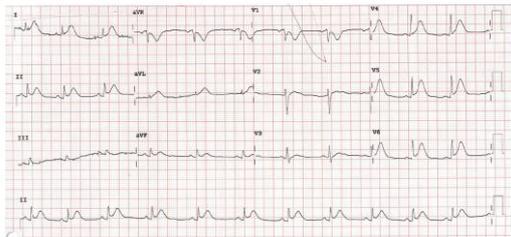
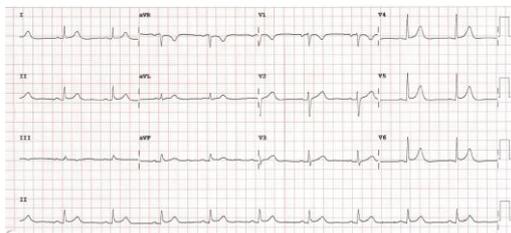
68yr-F presented with chest heaviness and shortness of breath. Recent investigation for anaemia showed bowel CA and she had received her first dose chemotherapy 3 days prior which included 5-FU. Previously well, no cardiac history. Had chest tightness when mobilising coming to ED. Vital signs stable.

Initial ECG



Serial hs-tpn I 5 and 10, with no further rise.

Progress ECGs -



Progress to lateral ST elevation prompted angiogram which was clear.

Attributed to coronary vasospasm from 5-FU, a recognised effect of the drug.

Lessons from practice

5-Fluorouracil-induced acute coronary syndrome



A case report

5FU is a commonly given chemotherapeutic agent with recognised cardiotoxicity which

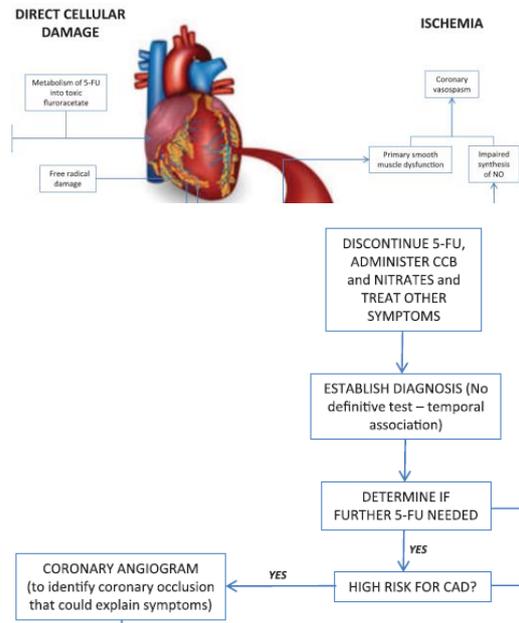
may manifest as myocarditis, coronary vasospasm, pericarditis, heart failure and death. It most commonly happens after the first cycle.

Therapeutic Advances in Medical Oncology

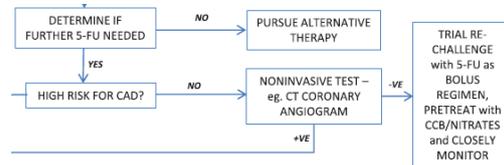
Review

5-fluorouracil and cardiotoxicity: a review

Ther Adv Med Oncol
2018, Vol. 10, 1-18



Workup may include angiogram based on risk.



Cease 5-FU if there is an alternate agent.

If CAD ruled out, eg by CT-CA, then 5-FU may be cautiously given if there is no alternative. Pretreat with aspirin, nitrates/calcium channel blockers, with close monitoring. It is high risk.

Rechallenge

- Controversial
- Recurrence up to 90%; death up to 13%^{5,14}
- Avoid if possible

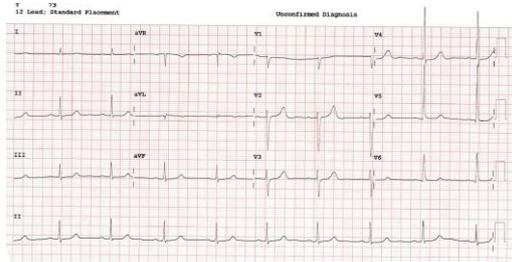
- Patients with nonsignificant CAD: avoid 5-FU if possible
- if not possible and risk/benefit ratio acceptable attempt cautious challenge with BOLUS regimen^{6,7,109,110}
- pretreat with 48 h of aspirin, CCB and long-acting nitrate
- careful observation and continuous ECG monitoring
- discontinue 5-FU if any symptoms/signs of cardiac event

Conclusion

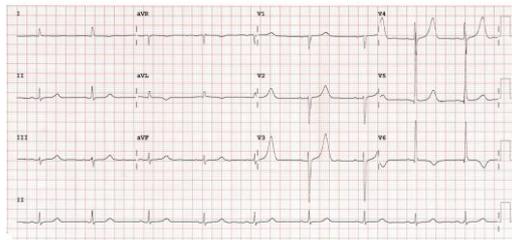
Cardiotoxicity related to 5-FU administration is a poorly understood but relatively common clinical entity

Case: 70yr-F presents with chest pain radiating to the neck, and concerning for ischaemia.

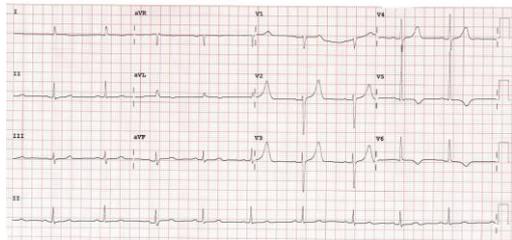
There were dynamic ECG changes and a troponin rise to 1926.



Progressed to peaked T waves with early take off of ST segment.

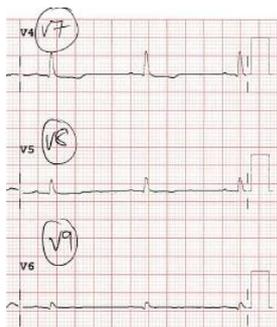
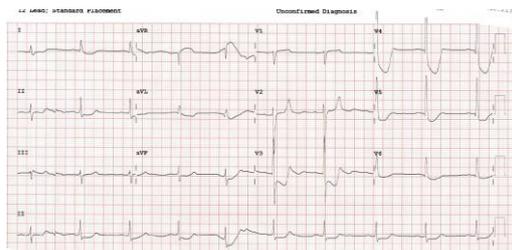


Subsequent T wave inversion lateral leads.

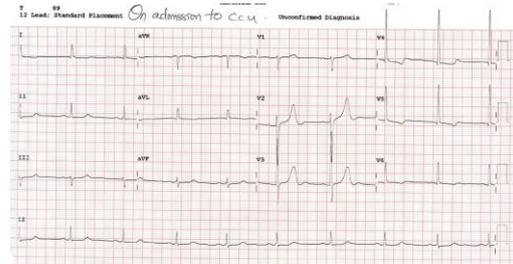


Coronary angiogram showed 20% occlusion left circumflex only.

She represented 6 days later when awoken with chest pain radiating to the jaw.



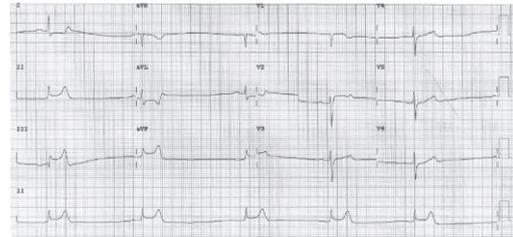
Possible posterior wall involvement was not confirmed using posterior V7-9 leads.



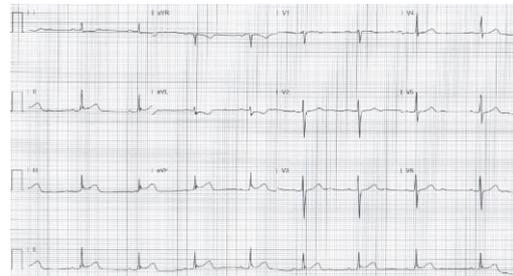
GTN gave little response, and she settled with oral amlodipine. She was changed to verapamil and metoprolol was ceased.

Ischaemia was attributed to coronary artery vasospasm with no occlusive coronary disease. hs- Troponin I peaked at 4402.

Case: 53yr-F awoken with chest pain radiating to neck with diaphoresis. Initial ECG normal, then repeated with further pain.



Pain resolved in 5 minutes with GTN, with resolution of ECG changes.



Further pain and ECG changes again resolved promptly with GTN. Serial troponins were -ve.

She was transferred for angiogram which was planned non-urgently, but expedited with further pain and similar ECG changes. There was no occlusive disease on angiogram.

It was attributed to coronary vasospasm, and managed with verapamil and isosorbide mononitrate, aspirin and a statin.

These updates are a review of current literature at the time of writing. They do not replace local treatment protocols and policy.