Clinical Twister

Answer for October 2011 Issue

This care plan is presented by Mr. Raymond MAK of Queen Mary Hospital.
And congratulations to Mr. MAK as he will be awarded gift voucher for medical books for his successful solution of this clinical twister! Care to win your prize as well? Keep an eye on our next Clinical Twister and help solving it!

Ms.Chan is a case with active problem of CHF and concurrent newly onset AF, besides her listed PMH. A number of aspects of her clinical conditions is worth commenting on, as follows:

1. AF

Stroke risk associated with AF

- given her AF background, her CHADS2 score amounts to 3 (1 for CHF, 1 for HT, 1 for Age ≥ 75), giving an annual risk of stroke of 5.9%. According to ESC guidelines, patients with a CHADS2 score of ≥2 should be given oral anticoagulant such as warfarin/dabigatran. Considering her advanced age, however, the benefit of anticoagulation to prevent stroke must be balanced against the risk of haemorrhage, since relatively higher risk of intracranial haemorrhage is associated with patients aged ≥75. There is insufficient data to fully gauge her bleeding risk, only her age and her hypertension currently count against her. Based on available information, the balance would still seem in favour of anticoagulation. Dabigatran at a lower dose of 110mg twice daily may be considered. Plavix may be stopped if dabigatran is chosen as the anticoagulation therapy.

Rate control for AF

- there is no appropriate drug in her current regimen for AF control. She is currently on nifedipine, a dihydropyridine calcium antagonist which is not indicated in AF. Non-dihydropyridine calcium antagonists such as diltiazem/verapamil are generally recommended. However, considering that CHF is now superimposed on her AF, choice or use of calcium antagonist is limited since in CHF only felodipine and amlodipine are considered non-detrimental to heart failure. These agents are both dihydropyridine which are unsuitable for AF control. An option could be to switch nifedipine to a β-blocker (e.g. bisoprolol / carvedilol / metoprolol). A once daily agent such as bisoprolol (initiate at 1.25mg/d titrating to target 10mg/d if tolerated) is preferred unless BP control is an issue in which case carvedilol may be chosen which has additional BP-lowering effect. If β-blocker does not control her AF or that it is not tolerated, amiodarone is an alternative.

2. CHF

- Continue with regular low dose or prn frusemide as appropriate for fluid and symptoms control.
- Consideration should be given if haemodynamically stable, to add an ACEI to her β-blocker since both provide significant mortality and morbidity benefits, and should be offered to all HF patients if tolerated and not contraindicated. This should also help to counter K+-loss from frusemide.

3. Hypertension

- There is no information about her current status of BP control. With the institution of the proposed agents above that also lowers BP, hopefully adequate BP control is achieved. There is indeed room for up-titration of the proposed agents (β-blocker/ACEI) after initiation to target doses both for CHF and BP control.

4. OA knee

- Avoid use of NSAIDs since they blunt the effect of diuretics, exacerbate fluid retention and may be harmful in HF.

5. Haemoglobin status and iron supplementation

- It is appropriate to discontinue iron supplementation based on patient's haematological presentation, as while she is on oral iron, her serum iron level is adequate and her TRF saturation high, her Hgb has remained static. It appears her marrow is hypo-responsive to iron therapy. Continued iron supplementation is unlikely to benefit her further and might produce adverse drug reactions.