

MARCH ANSWERS

QUESTIONS

1. Is anticoagulation therapy indicated in this lady?
 - a. Yes
 - b. No
2. What would your options be, other than warfarin?
 - a. Aspirin
 - b. Closure of the left atrial appendage
 - c. All of the above

ANSWERS

1. a 2. c

Atrial fibrillation is a common disorder and it occurs in up to 10% of people older than 80 years old. It increases the risk of stroke by more than 5 times. Studies have shown that anticoagulation therapy with warfarin can effectively lower the risk of stroke in this population. However, despite its efficacy, warfarin therapy is not always accepted by patients due to the need for frequent blood monitoring, the narrow therapeutic window, and interactions with herbal medicines. In addition, the bleeding risk associated with warfarin therapy may impose a clinical dilemma, as in the current example, where its use may be relatively contraindicated with an active or recurrent bleeding source that cannot be eradicated.

Thromboembolism from the left atrial appendage is believed to be the main cause of stroke in these cases. Surgical closure of the left atrial appendage is a routine procedure in many centres for patients undergoing valve or arrhythmia surgery. However, without other co-existing indications for open heart surgery, an open surgery alone for left atrial appendage closure for stroke prevention appears to be too invasive and traumatic for most clinicians and patients to accept.

In recent years, there has been development of percutaneous devices for non-surgical closure, using a transcatheter technique. Various devices are available and they include the Watchman device and the Amplatzer Occluder device. Typically the procedure is done via femoral vein approach. The atrial septum will then be punctured and the device will be delivered to the left atrial appendage via a delivering cable (Figure). The PROTECT-AF trial is a randomized trial comparing the efficacy of the Watchman device with warfarin therapy. Non-inferiority in reducing stroke was demonstrated.

Although transcatheter closure appears to be a useful alternative in patients not suitable for long-term anticoagulation therapy, some limitations still exist for these devices. A period of anticoagulation or antiplatelet therapy is still needed after the procedure, and it may still pose a certain bleeding risk during this period. Substantial procedural risks, such as dislodgment and embolization of the device, perforation with pericardial effusion, and acute peri-operative stroke, have been observed. The risks and benefits of the procedure have to be carefully balanced. At this stage, device therapy for left atrial appendage closure should be limited to highly select patients with favourable cardiac anatomy. Current evidence does not recommend transcatheter closure as a substitution for warfarin therapy in routine situations.

Further reading

Maisel WH. Left atrial appendage occlusion – closure or just the beginning? *N Engl J Med* 2009;360(25):2601–3.

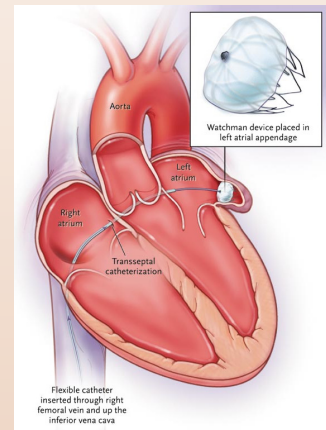


Figure. Transcatheter closure of the left atrial appendage.