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| Great Western Hospitals NHS Foundation Trust |
| The Management of Atrial Fibrillation |
| Emergency Department Guideline |
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| This is an emergency department guideline for the management of atrial fibrillation in the acute presentation at Great Western Hospital Swindon. If you have any questions re the guideline; then please talk to a senior doctor in the ED. |

## Management of New Onset Atrial Fibrillation

Aim in New onset AF

RATE (80-100bpm at rest) vs. RHYTHM control (cardioversion to sinus rhythm)

Management

1. **Anticoagulation**: ALL patients to receive treatment dose of dalteparin (unless contraindicated)
2. **IV access and bloods** (including TFTs, Potassium, U+E)
3. Is there **underlying cardiac failure/ infection** that has precipitated this AF? If so then this needs treating first and could be enough to control the AF.
4. Decide if your patient is compromised or not…

Compromised patient

Inform senior ED doctor and Treat with immediate DC cardioversion (if the compromise is due to the AF).

Your patient is compromised if:

* Systolic BP <90mmHg (because of the AF – rather than dehydration / infection / blood loss)
* Severe chest pain
* Rate >200 bpm

Treatment: Synchronised, biphasic DC cardioversion (100-150J and increase as needed). Under sedation.

Uncompromised patient

You need to decide how long the AF has been present for:

* >4 hours but <48 hours or
* >48 hours

Your management changes depending on how long your patient has been in AF.

AF present for >4 hours but <48 hours

* Elderly or poor LV function
  + **Cautious beta blockade** to control rate (**digoxin** if evidence of fluid overload / heart failure)
  + Or **IV** **amiodarone** (300mg in 5% dextrose over 20-60 mins followed by 900mg over 23 hours)
* Absence of ischemic heart disease, valvular heart disease, LVF or non-sustained VT and CLEAR history of recent onset. ECG must be normal other than atrial fibrillation
  + **IV flecanide** (2mg/kg over 20-30mins to a max dose of 150mg)
* Flecanide contraindicated or unsuccessful
  + Urgent DC cardioversion

AF present >48 hours

1. **Beta blocker** or **verapamil** to control rate (**digoxin** if evidence of cardiac failure)
2. Anticoagulate guided by CHADSVASC. Warfarin could be managed by the GP/medical teams.
3. Suggest outpatient echocardiogram.
4. Consider elective DC Cardioversion after 4 weeks: this can be arranged by the GP or medical team

Admission or Home +/- follow up

Admission

* Those with a precipitating illness which needs treating need admission.
* All patients who have been compromised by AF
* All patients who have received IV amiodarone
* Patients with a tachycardia (HR>100bpm) should not be sent home.

You need to decide whether the patient needs to come in to the main hospital (LAMU under the medical team) or if they can be a quick turn around and can be managed on ambulatory care.

Discharge

Patients must be all of the following to be eligible for discharge:

* Asymtomatic
* Uncompromised patients who have either been converted back to sinus rhythm
* Uncompromised patients still in AF whose rate is 80-100bpm (it is worth mobilising these patients and making sure that their rate doesn’t increase to greater than 100- (220 minus patient’s age) bpm on exercise).
* No evidence of underlying abnormality on examination (eg murmur requiring ECHO) or investigations (CXR- evidence failure, bloods- abnormal TFTs, high/low K) that need admission to treat.

**All discharged patients all need two things**

1. Anticoagulation discussions
2. Follow up

Advise these patients that they need to attend their GP surgeries for discussions about long term anticoagulation/warfarin risks etc and also for them to arrange OPD investigations and cardiology follow up if needed.

If your patient is already awaiting cardiology follow up, or under the cardiology team already then it maybe a good thing to write to them to let them know of their attendance to the ED.

Choice/doses of medications in ED GWH

Anticoagulation in ED

Treatment dose of **dalteparin** is weight based:

* <46kg: 7500units, 46-56kg: 10,000units, 57-68kg: 12,500units, 69-82kg: 15,000units, >83kg: 18,000units

Beta blockers

* **Metoprolol** 2.5-5mg bolus IV (can be repeated after 5mins)
* Metoprolol 25- 50mg orally TDS
* Beta blockers can be given to patients with poor LV function as long as there are no clinical signs of heart failure

Calcium channel blockers

* **Verapamil** 2.5-5mg slow IV
* Cannot be given to patients with poor LV function

Flecanide

* 1-2mg/kg slow IV (maximum dose 150mg)
* Should be avoided in patients over 65 and those with structural heart problems and IHD.

Amiodarone

* 300mg in 5% dextrose over 20-60 minutes followed by 900mg over 23 hours

Digoxin

* 250-500mcg orally or IV
* There is no advantage of IV over oral digoxin
* This is very much a second line drug in AF.
* Please use with care in elderly and impaired renal function.
* This does not effect the AV node so may well control AF while the patient is lying in a hospital bed but will not rate control them when they get out of bed and walk around