GUIDELINE FOR THE MANAGEMENT OF PATIENTS WITH REGULAR BROAD-COMPLEX TACHYARRHYTHMIA

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and/or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Lead Clinician

Dr W Foster — Consultant Cardiologist

Approved by Cardiology Directorate Committee on: 31ST October 2018

This is the most current document and is to be used until a revised version is available: 31st October 2020

THIS DOCUMENT MUST NOT BE PHOTOCOPIED

PLEASE NOTE THAT ALL CLINICAL GUIDELINES / PROTOCOLS / POLICIES ARE ALSO AVAILABLE ON THE TRUST INTRANET

Key amendments to this guideline

Date	Amendment	By:
5th August 2015	Document extended for 12 months as per TMC paper approved on 22nd July 2015	TMC
July 2016	Document extended for 12 months as per TMC paper approved on 22nd July 2015	TMC
August 2017	Further extension for 12 months as per TMC paper approved on 22nd July 2015	TMC
December 2017	Sentence added in at the request of the Coroner	
June 2018	Document extended for 3 months as per TLG recommendation	TLG
October 2018	Document reviewed with no changes	Dr Aldhoon

GUIDELINE FOR THE MANAGEMENT OF PATIENTS WITH REGULAR BROAD-COMPLEX TACHYARRHYTHMIA

INTRODUCTION

Regular broad-complex tachyarrhythmia (BCT) may be due to:

- Ventricular tachycardia (VT)
- Regular supraventricular tachycardia (SVT) such as atrial flutter or AV nodal re-entrant tachycardia (AVNRT) / atrioventricular re-entrant tachycardia (AVRT) with aberrant conduction (i.e. bundle branch block)

VT is usually but not always associated with structural heart disease or coronary heart disease.

BCT should be regarded and treated as VT unless strong evidence to the contrary exists (For example: response to adenosine or previous identical arrhythmia proven to be SVT with aberrant conduction)

PATIENTS COVERED

All patients with regular broad-complex tachyarrhythmia.

GUIDELINE

1. Assess the patient.

2. If the patient is pulseless (i.e. in cardiac arrest) perform **immediate** defibrillation or if a defibrillator is not immediately available start immediate CPR and call for the cardiac arrest team. (Follow guidelines for cardiac arrest)

3. Otherwise, record appropriate history.
   Clinical examination: record heart rate, BP, signs of heart failure? signs of lung disease? Unless the patient is severely compromised, record a good quality 12 lead ECG and label with the patient's identity, date and time.

4. The choice of immediate treatment is determined by the clinical state of the patient. In the presence of **adverse features** (e.g. systolic BP <90, persistent chest pain, acute heart failure) seek expert help with a view to **immediate synchronised cardioversion**. This will require conscious sedation or general anaesthesia: check when the patient last ate or drank and keep nil by mouth; call for anaesthetics support if required.

   If arrhythmia persists or recurs after attempted cardioversion (maximum 3 shocks) start intravenous amiodarone 300 mg over 20-60 minutes, followed by 900 mg over 24 hours. Amiodarone should be given by central venous cannula (alternatives include long lines or drum catheters); in emergency situations it is

acceptable to give the loading (20-60 minute) dose peripherally via a large bore cannula. Obtain urgent in-patient cardiology assessment.

5. If the arrhythmia is well tolerated, consider vagal manoeuvers (For example: carotid sinus massage, CSM) / intravenous adenosine to unmask an SVT with aberrant conduction. CSM or adenosine should be carried out with continuous ECG monitoring to document the response. CSM is contra-indicated in the presence of a carotid bruit or documented carotid artery disease. Adenosine should be given as a 6mg rapid IV bolus, increased to 12mg if 6mg is ineffective. If the arrhythmia has been shown **definitely** to be SVT with aberrant conduction (For example: by termination with CSM / adenosine, or if flutter waves are revealed), treat as for narrow-complex regular tachycardia or atrial flutter as appropriate. Note that asthma / COPD is a contra-indication to adenosine use.

6. If the arrhythmia is tolerated well (no adverse features as in 4) consider drug therapy first. Use amiodarone 300mg intravenously over 20-60 minutes, if necessary followed by infusion of 900 mg over 24 hours. Continue to monitor vital signs and record 12-lead ECGs at intervals during treatment. Arrange cardioversion if adverse features develop. Amiodarone should be given by central venous cannula (alternatives include long lines or drum catheters); in emergency situations it is acceptable to give the loading (20-60 minute) dose peripherally via a large bore cannula.

7. If treatment restores sinus rhythm record a 12-lead ECG and continue to monitor vital signs and cardiac rhythm. Consider and investigate the possible cause of BCT. Correct electrolyte imbalances, especially K and Mg.

8. Patients admitted with BCT should be seen by a cardiologist as early as is practicable during their admission. Many of these patients will require consideration of implantable cardioverter-defibrillator therapy before discharge from hospital.

9. When a patient presents with a self-terminating regular BCT that has been documented in the community or in the ambulance, assess the patient. Refer to the cardiology service for advice on further investigation and treatment.

CONTRIBUTION LIST

Key individuals involved in developing the document

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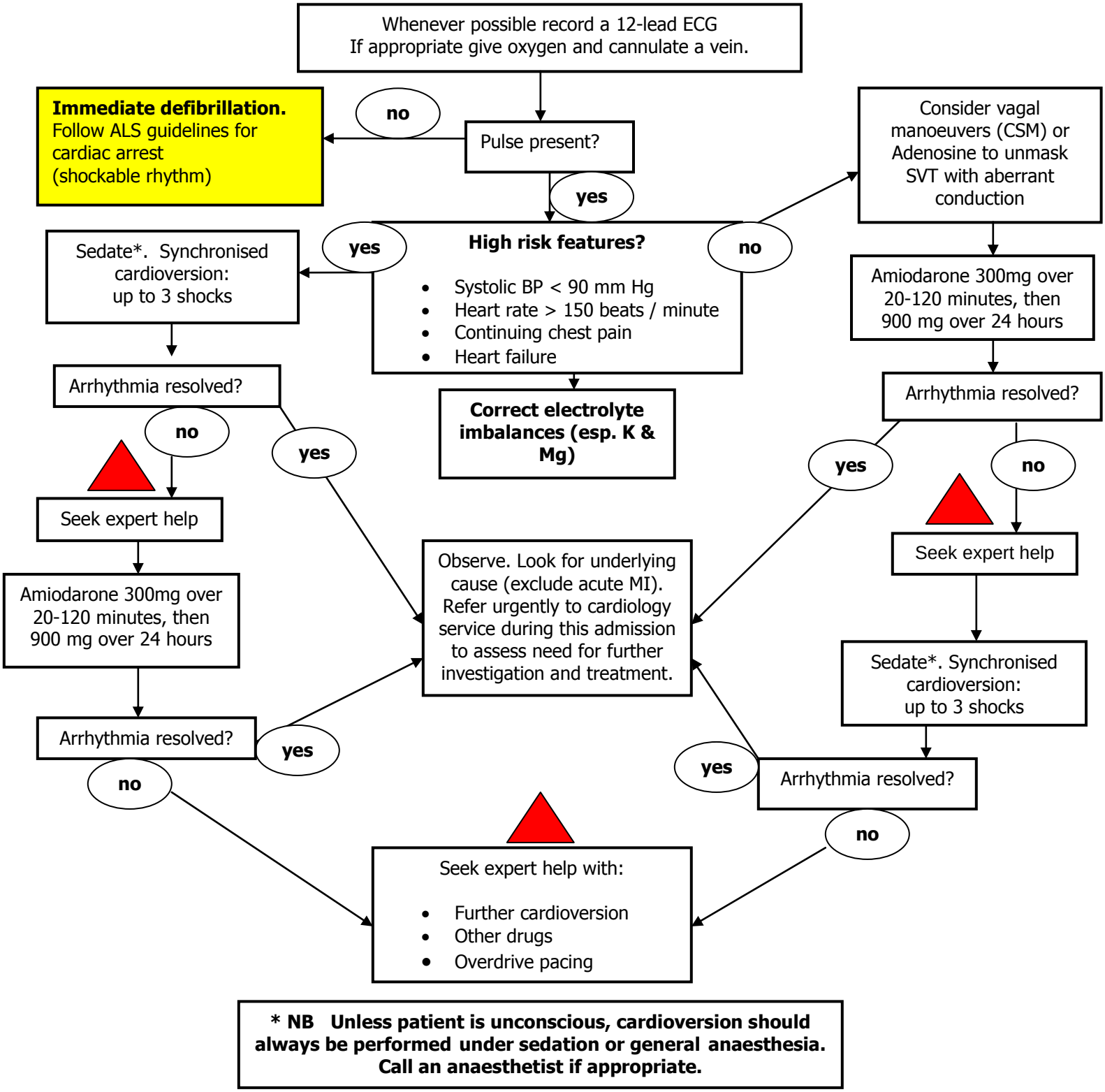
MONITORING TOOL

STANDARDS:

Item	%	Exceptions
12-lead ECG recorded during arrhythmia	100%	Collapsed patient
Cardioversion for high-risk features	100%	Expert advice against
Early in-patient cardiology assessment	100%	None
Copy ECGs given to patient where appropriate	100%	None
Copy ECGs sent to GP	100%	None
Patient information leaflet given	100%	None

Regular broad complex tachycardia



Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	**Does the policy / guidance affect one group less or more favourably than another on the basis of:**		
	Race/Ethnic Origin/Nationality/culture	No	
	Disability	No	
	Gender	No	
	Religion / Belief	No	
	Sexual Orientation: including L.G.B.T.	No	
	Age	No	
	Marital Status	No	
	Gender Reassignment	No	
	Maternity/Pregnancy	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and / or justifiable?**	No	
4.	**Is the impact of the policy / guidance likely to be negative?**	No	
5.	**If so can the impact be avoided?**	N/A	
6.	**What alternatives are there to achieving the policy / guidance without the impact?**	N/A	
7.	**Can we reduce the impact by taking different action?**	N/A	

NB:
Where an inappropriate, negative or discriminatory impact has been identified please proceed to conduct a Full Equality Impact Assessment and refer to Equality and Diversity Committee, together with any suggestions as to the action required to avoid / reduce this impact.

Advice can be obtained from the Equality and Diversity Leads in HR and Nursing Directorates (details available on the Trust intranet).

Supporting Document 2 - Financial Risk Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of Document:	Yes / No
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration before progressing to the relevant committee for approval