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Shipley

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Westcliffe Cardiology Service
Guidance on the Management of Palpitations in Primary care

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Foreword

The Westcliffe Cardiology Service, based at the Westcliffe Medical Practice in Shipley has been established for several years. It provides cardiology services in a local primary care setting and has been led by Dr Matthew Fay and Dr Andreas Wolff as GPwSI in cardiology. The team has now enlarged with the involvement of nurses specialists and a physiologist

In 2010 the Westcliffe Cardiology started a locality branch service in Ilkley supported by the Ilkley Moor Medical Practice. To assist practices in the decisions in clinical care the E-Cardiology service started through SystmOne to assist clinicians in test interpretation, patient management and advice on appropriate referral.

The Guidance on the Management of Palpitations in Primary Care has been written by Matt Fay and Andreas Wolff to give a view on how to review, investigate and as appropriate when and where to refer people suffering from palpitations. It is not designed as a comprehensive review of the aetiology, pathology and treatment of palpitations.

Included in the guide is simple advice and well as suggested resources for patient education and further clinician support.

Dr Matthew Fay & Dr Andreas Wolff

Introduction

This is a common symptom that is often seen in general practice and can often lead to referral for investigations or for clinical review. The symptom can cause distress to the patient, but can also cause distress to the reviewing clinician. Despite this anxiety the majority of palpitations are not associated with dysrhythmia and of the ones found to be arrhythmias many of these arrhythmias are benign in nature. It can be important to state that less than 1 in 2 with palpitations are the issues cardiac in nature

The skill in identifying the difference between the benign and the significant dysrhythmia presenting as palpitations is achievable in primary care through careful assessing the appropriate history and the assessment of the 12 lead ECG.

Definitions

Palpitation: is the uncomfortable awareness of the heart rhythm. Normal palpitations occur with exercise, emotion and stress or after taking substances that increase adrenergic activity or decrease vagal activity.
Abnormal palpitations may occur for no reason and may be fast or strong-and-slow.
Palpitations may point to cardiac arrhythmia; however many with rhythm disturbances will not have palpitations, instead experiencing syncope, shock and chest pain

Syncope: is a sudden but brief loss of consciousness that is caused by inadequate blood supply to the brain. Recovery is spontaneous and rapidly complete. Syncope is common, disabling and possibly associated with sudden cardiac death.

Vertigo: is a hallucination of movement of the environment about the patient, or of the patient with respect to the environment.
It is not synonymous with dizziness.
It may be central - due to a disorder of the brainstem or the cerebellum - or peripheral - due to a disorder in the inner ear or the VIIIth cranial nerve.
Always would suggest ENT review prior to cardiac review unless associated with palpitations or chest pain

High Risk Factors:
Pre existing structural heart disease
History of heart failure
History of syncope or pre-syncope
FH of Sudden Cardiac Death (<40yrs)
Exertional cardiac symptoms (including exertional palpitations)
Resting 12 lead ECG abnormality (pre excitation, old MI, LBBB)

Vagal Manoeuvres:
Valsalva Manoeuvre
Carotid Sinus Massage (if practitioner feels competent and no bruits present)
Face immersion in cold Water

History

What does the patient mean?

As stated in definitions palpitations does not necessarily indicate cardiac dysrhythmia but an unusual pounding sensation. Hence people presenting to the clinician in primary care generally use this term correctly but in its broadest sense. It is for the clinician to define exactly what they mean. Palpitations are a symptom and are not necessarily arrhythmia, sometimes it could be referring to a different issue, such as chest discomfort.

The heart rate at the time of palpitations should be explored asking the patient to tap the heartbeat with their hands can help further clarify the rate, and also give an idea about regularity. There is a suggestion that regular palpitations are more likely to be an arrhythmia than irregular ones. The brief irregularities such as missed beats, fluttering sensations or extra beats, are often caused by ectopy. It is of value to know the duration and frequency of palpitations to understand the impact on the patient's life.

It is important to find out about the circumstances during which palpitations occur. Does it happen when the patient is at rest or does it happen during activity Can it be brought on by swallowing cold food or drinks; can it be stopped by coughing or breath holding? The former can sometimes be found in atrial flutter while the latter could suggest an AV re-entrant tachycardia.

Associated Features

Associated pre-syncopal symptoms or loss of consciousness are high risk factors and suggest detailed assessment is required. Syncope (see Westcliffe Guide to Syncope in Primary Care) can be the only symptom of arrhythmia. Also recurrent un explained syncope, syncope with injury of syncope with exertion should be referred for further assessment

Dyspnoea can be a sign of tachydysrythmia, at times it may indicate cardiac decompenstation such as in atrial fibrillation with a rapid ventricular release. Chest pain can be associated with palpitations, this can be the due to underlying coronary disease but a rapid heart rate can cause chest discomfort even when the heart is structurally normal

Contributing Factors

Anxiety is often associated with palpitations and fluttering in the chest. This is clearly well understood by the primary care clinician. However a full history is still required as someone can be suffering from anxiety and be taking pro-arrhythmic medication.

Life style factors such as excessive caffeine intake, alcohol abuse or illicit drug use needs to be discussed.

Medication can also be part of the aetiology; thyroxine replacement, beta-agonists and calcium channel receptor blockers can all cause palpitations. The pro-arrhythmic nature of anti-arrhythmics is also a concern and an increased severity in people initiating this therapy should be discussed with the responsible physician. There is a long list of medication that can prolong the cQT and their effects can be summative. A non-exhaustive list is included in the appendix.

Family History

Taking a careful family history, particularly paying attention to cardiac muscle problems, a history of early onset coronary disease or a history of atrial fibrillation (often found through discussing the setting of cardioversion). Asking about relatives with ICDs or pacemakers can also assist in finding complex cardiac disorders.

Questions around young unexplained deaths may indicate the presence of Sudden Arrhythmic Death Syndromes (SADS). Sometimes these may be explained as cardiac issues but the may be concealed as drownings, road traffic accidents or suicides. Questions should extend to cousins and beyond.

Examination & Investigation

Examination

When the patient is assessed in primary care often they are asymptomatic and the examination is normal. If the patient is symptomatic at presentation they should be assessed rapidly for heamodynamic compromise. If marked this may warrant discussion with the secondary cardiology team or assistance from the paramedics.

In the asymptomatic patient, a cardiovascular assessment is essential with particular attention to the rate, rhythm and character of the pulse and a manual blood pressure assessment. Signs of heart failure syndrome or murmurs may point to underlying structural heart disease.

Investigations-Bloods

Blood tests should be performed; these should include Full Blood Count to exclude anaemia, Electrolytes, Liver Function Test, Glucose assessment, Thyroid Function Tests and in the over 35 year olds, who have not had a recent cardiovascular risk assessment, cholesterol and lipid assessment.

Investigation-ECG

The 12 lead ECG is the most useful test in the assessment of palpitations and is mandatory in all patients with palpitations as long as they are not compromised by symptoms where admission may be appropriate. An ECG performed during symptoms is of great value and the patient should be made aware of its value and asked to attend to get an ECG performed if they are asymptomatic and still without a diagnosis. Chapter 8 of the NSF inc Cardiology recommends that if an ECG is performed a copy should be given to the patient so they are able to give it to their reviewing clinician.

If there is uncertainty about the nature of an ECG then a review of the trace should be arranged

Abnormality on the ECG such as LVH or previous MI may suggest underlying structural heart disease. Problems with conduction and repolarisation may point further to arrhythmic illness. Issues such as second degree block or complete heart block should be discussed with a hospital cardiologist promptly.

Investigations-ECG changes that are significant

- Atrial fibrillation
- Second- and third-degree AV block
- Signs of previous myocardial infarction
- Left ventricular hypertrophy and left ventricular strain patterns
- Left bundle branch block
- Abnormal T-wave inversion and ST-segment changes
- Signs of pre-excitation (short PR interval and delta waves)
- Abnormal QTc interval and T-wave morphology

Investigations-Ambulatory Rhythm Monitoring

This is of value if the symptoms are frequent, the duration of recording should reflect the frequency of symptoms. A normal recording during an asymptomatic period does not exclude arrhythmic problems. A 24hr period of recording gives a positive result in less than 1 in 10 cases.

Risk Stratification and Referral

Risk Stratification

The majority of patients presenting with palpitations do have an arrhythmia and of those who do, many do not have an arrhythmia of prognostic significance. Risk assessment is a guide to the clinician in primary care to aid in decision-making around further investigation and referral.

Dr Michael Cooklin a cardiologist based in London and the South London Cardiac and Stroke Network, has raised awareness of risk stratification in arrhythmic illness with the 'Traffic Light' system.

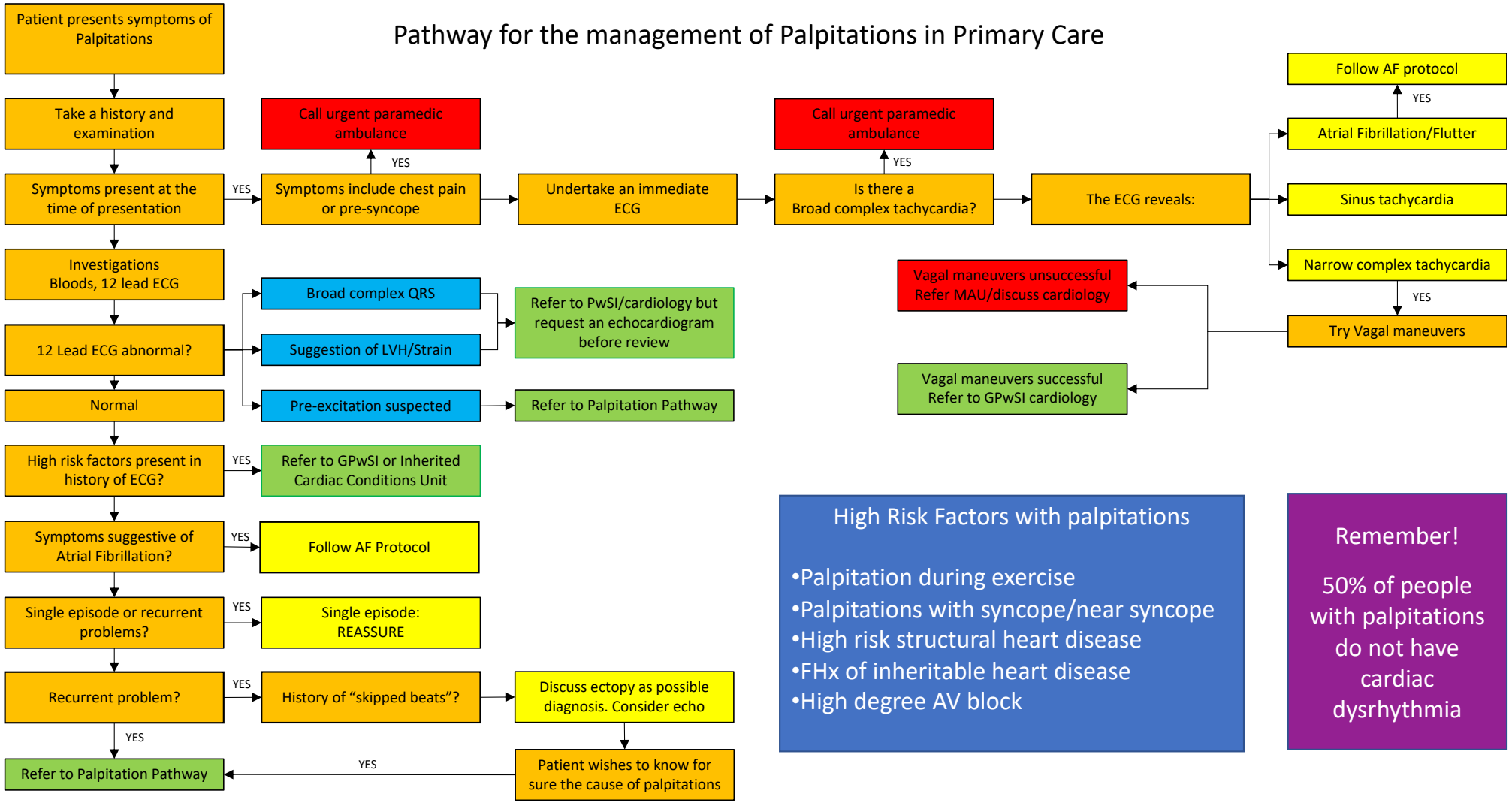
Low Risk: Management in Primary Care	Refer for Cardiology opinion	Refer for Urgent Cardiology opinion
• Skipped beats • Thumping beats • Short fluttering • Slow pounding AND • Normal ECG AND • No family history AND • No structural heart disease	• History suggests recurrent tachyarrhythmia • Palpitations with associated symptoms AND/OR • Abnormal ECG AND/OR • Known Structural heart disease	• Palpitations during exercise • Palpitations with syncope or near • High Risk structural heart disease • Family history of inherited heart disease/SADS • High degree atrioventricular block

Referral

When a clinician feels that there is a clinical scenario that they are unable to confidently manage then a referral for further advice or review is always appropriate.

It may be appropriate to refer for a clinical opinion, rhythm monitoring or for a full review. The following shows pathways to consider how you may wish to proceed.

General Management Pathway for Palpitations in Primary Care



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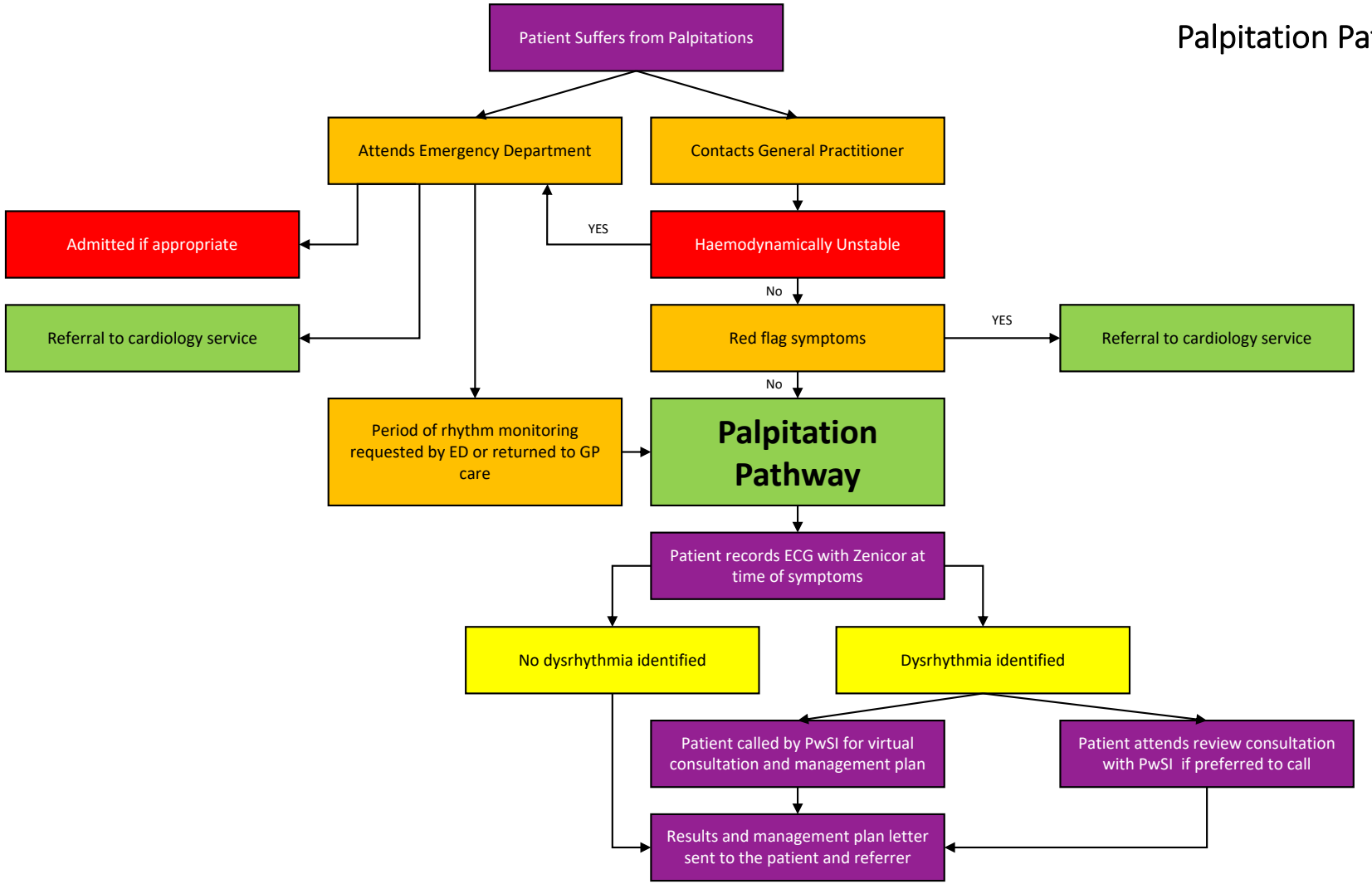
he Westcliffe Cardiology pathway for Palpitations in Primary Care



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Summary and Other Considerations

ummary

ost people presenting in primary care with palpitations are not suffering from a cardiac arrhythmia, through careful history taking and risk assessment his can assist in support of the people who need reassurance and investigation and referral on of people who require the expert review.

lthough some investigations can be used to assist in the reassurance of the patient the ECG remains a mandatory investigation in the assessment of the atient with palpitations. Some of the changes on the ECG can be subtle and if there is any doubt in the reviewers mind a review of the ECG or the patient hould be arranged.

he ambulatory ECG is generally over regarded in its ability to obtain a diagnosis however can be a useful investigation to assist in the reassurance of he patient. In a patient with risk who returns a recording with no significant dysrhythmia but was asymptomatic during the monitoring period, onsideration should be given of further assessment.

riving and Palpitations

rrhythmias have consequence on people's lives in many ways and the ability to hold a driving licence is one. The DVLA regulations state that if a person suffers incapacity or ay suffer incapacity from an arrhythmia they must cease driving. It is the clinician's responsibility to ensure the person is aware of this and documentation of this advice in the otes is of paramount importance.

ore information can be found at: www.dvla.gov.uk/medical/ataglance.aspx

eb Links Of Assistance

ww.heartrhythmcharity.org.uk	Arrhythmia Alliance, an umbrella charity of other groups dealing with arrhythmia
ww.stars.org.uk	The syncope trust, for clinician and patient support in the area of syncope
ww.atrialfibrillation.org.uk	The international charity to support patients and clinicians in the area of atrial fibrillation
ww.sadsuk.org	The national charity to support relatives and raise awareness of Sudden Arrhythmic Deaths
ww.c-r-y.org.uk	Cardiac Risk in the Young, supporting research and support for sudden cardiac deaths
ww.dvla.gov.uk/medical/ataglance.aspx	DVLA website for medical advice on driving
ww.Long-QT-Syndrome.com	For lists on drugs that can protract the QT interval