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Investigating the clinical and cost-effectiveness of two different drugs (amiodarone and beta blockers) to treat patients with new-onset atrial fibrillation whilst in the intensive care unit

Submission date
14/09/2023

Recruitment status
Recruiting

Registration date
15/09/2023

Overall study status
Ongoing

Last Edited
10/05/2024

Condition category
Circulatory System

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[X] Record updated in last year

Plain English Summary

Background and study aims
Each year about 10% of patients who are being treated in an ICU will develop an irregular heartbeat which they did not have previously, called new-onset atrial fibrillation (NOAF). We do not fully understand what causes NOAF in these patients but believe that it may be the result of a number of factors including:
1. Normal body reactions to infection and injury
2. Altered levels of electrolytes (salts) in a patient's blood
3. The drugs used to support a patient's blood pressure
4. Certain commonly used ICU procedures
Some of the studies to look at the risks associated with AF suggest that patients who develop NOAF whilst in the ICU seem to be at higher risk of complications such as heart attack and stroke, which means that they need to spend a longer time in hospital. Some patients who develop NOAF may also end up in permanent AF and require lifelong treatment. We need to do a trial because we do not have a clear understanding of the best way to treat these patients.

Who can participate?
Patients aged 16 years and over in an adult ICU who have developed NOAF

What does the study involve?
Participants will be randomly allocated to receive either amiodarone or beta-blockade. The choice of dose (and in the case of beta-blockade, the type) rests with the clinical team at site. Participants will be treated with the allocated intervention until sinus rhythm has been maintained for 24 hours. Clinicians should then consider stopping the intervention according to local practice. Both interventions can be administered by infusion/injection or orally.
Information will be collected from medical notes including the results of tests that are done as part of usual care. A researcher will monitor the patient's progress for 90 days from when they first joined the study and will collect information on:
1. The illness and treatment during their stay in ICU

2. The date the patient is discharged from ICU
3. The date the patient is discharged from hospital
4. How the patient feels around 60 days later (30-minute telephone call if discharged)
5. How the patient feels around 90 days later (30-minute telephone call if discharged)

What are the possible benefits and risks of participating?
While there is no direct benefit or financial incentives for patients that take part in this trial, the information provided by the trial may help in the long-term, to improve and shape future care for ICU patients who develop NOAF.

Where is the study run from?
The Birmingham Clinical Trials Unit (BCTU) coordinates the study at the University of Birmingham (UK)

When is the study starting and how long is it expected to run for?
October 2022 to December 2026

Who is funding the study?
The National Institute for Health and Care Research, Health Technology Assessment (UK)

Who is the main contact?
abbrupt@trials.bham.ac.uk

Study website
https://www.birmingham.ac.uk/abbrupt

Contact information

Type(s)
Scientific

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Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number
1007930

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
RG_22-153, IRAS 1007930, CPMS 57843

Study information

Scientific Title
A randomised controlled trial to investigate the clinical and cost effectiveness of Amiodarone vs Beta Blockade for new-onset atrial fibRillation in icU - a Pragmatic sTudy (ABBRUPT)

Acronym
ABBRUPT

Study hypothesis
The ABBRUPT trial will assess the clinical and cost-effectiveness of two commonly used treatments for new-onset atrial fibrillation (NOAF) in patients in ICU to establish which management of AF is best to avoid harm and achieve optimal outcomes.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 20/10/2023, South Central - Oxford C (2 Redman Place, Stratford, London, E20 1JQ, United Kingdom; None provided; oxfordc.rec@hra.nhs.uk), ref: 23/SC/0334

Study design
Multi-centre interventional randomized controlled open-label trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Hospital

Study type(s)
Quality of life, Treatment, Efficacy

Participant information sheet
Not available in web format, please use the contact details to request a patient information sheet.

Condition
New onset atrial fibrillation (NOAF)

Interventions
Patients will be randomised following confirmation of eligibility by a medically qualified doctor. They will be randomised to receive either amiodarone or beta-blockade. The choice of dose (and in the case of beta-blockade, the type) rests with the clinical team at site. Patients randomised to amiodarone will receive a loading dose (usually 300 mg over 1 hour) followed by a continuous infusion of (usually) between 300-1200 mg (usually 900 mg) per day with the treating clinician choosing the route of administration and duration. For those patients randomised to the control group, clinicians will be given the choice of beta-blocker: bisoprolol, metoprolol, esmolol, propranolol, atenolol, labetalol, carvedilol, and landiolol. The beta-blocker choice should reflect local availability and familiarity. They may be administered enterally or intravenously; dosing should be according to local practice. Patients will be treated with the allocated intervention until sinus rhythm has been maintained for 24 hours. Clinicians should then consider stopping the intervention according to local practice. All participants will be followed up for 90 days from randomisation.

Intervention Type
Drug

Pharmaceutical study type(s)
Pharmacoeconomic

Phase
Phase III

Drug/device/biological/vaccine name(s)
Amiodarone, atenolol, bisoprolol, carvedilol, metoprolol tartrate, propranolol, Betaloc [metoprolol tartrate], esmolol, labetalol, Rapibloc [landiolol hydrochloride]

Primary outcome measure
90 day mortality measured using patient records

Secondary outcome measures
1. ICU and hospital mortality measured up to day 90 using patient's medical notes
2. Rates of cardiovascular events including stroke, myocardial infarction or thromboembolism up to 90 days using patient's medical notes
3. Rate of established AF by the end of ICU stay/death/day 90 by using patient's medical notes
4. Number of episodes of bradycardia up to day 90 by using patient's medical notes

5. Number of bradycardia and bradycardic arrhythmias with haemodynamic compromise requiring intervention measured up to day 90 by using patient's medical notes
6. Number of significant hypotension episodes requiring intervention up to day 90 by using the patient's medical notes
7. Heart block measured up to day 90 by using patient's medical notes
8. Arrhythmia with haemodynamic compromise requiring intervention including DC cardioversion up to day 90 by using patient's medical notes
9. Cost-effectiveness of the interventions measured up to day 90 by using patient's medical notes
10. Healthcare resource use including ICU and hospital length of stay measured up to day 90 by using patient's medical notes

Overall study start date
01/10/2022

Overall study end date
31/12/2026

Eligibility

Participant inclusion criteria
1. Patients in an adult ICU (age ≥16 years)
2. Onset of NOAF during the acute illness (A&E, deterioration on ward, after surgery) having previously been in sinus rhythm and not known to previously have had AF.
3. A minimum duration of AF of at least 30 minutes
4. Usual electrolyte management with potassium and magnesium according to site practice
5. A clinical indication to treat NOAF as determined by the attending clinician

Participant type(s)
Patient

Age group
Adult

Lower age limit
16 Years

Sex
Both

Target number of participants
2,560

Participant exclusion criteria
1. Patients in receipt of amiodarone or a beta-blocker in the previous 24 hours
2. Patients receiving current concomitant medication with treatments that are contraindicated with the intervention/comparator medications
3. Patients with a serum potassium of <4 mmol L-1
4. Patients with a serum magnesium of <1.0 mmol L-1
5. Patients having undergone cardiac surgery during the current hospital admission, defined as

any surgery including stent procedures such as percutaneous coronary interventions or other angioplasty procedures done on the heart muscle, valves or thoracic arteries including the thoracic part of the aorta
6. Patients with Thyrotoxicosis
7. Patients where there is a plan for withdrawal of life support therapy within 24 hours
8. Patients who have had other thoracic surgery that ingresses the thorax
9. Patients with any other known contraindication or known sensitivity to beta-blockers or amiodarone
10. Patients with a known pregnancy or patients currently known to be breastfeeding
11. Patients with any known previous documented history of AF, whether permanent, persistent or paroxysmal

Recruitment start date
08/05/2024

Recruitment end date
30/06/2026

Locations

Countries of recruitment
England

Northern Ireland

Scotland

United Kingdom

Wales

Study participating centre
East Surrey Hospital
Canada Avenue
Redhill
United Kingdom
RH1 5RH

Study participating centre
Lincoln County Hospital
Greetwell Road
Lincoln
United Kingdom
LN2 5QY

Study participating centre
Royal Free London NHS Foundation Trust
Royal Free Hospital
Pond Street
London
United Kingdom
NW3 2QG

Study participating centre
Royal Sussex County Hospital
Eastern Road
Brighton
United Kingdom
BN2 5BE

Study participating centre
St Georges Hospital
Blackshaw Road
Tooting
London
United Kingdom
SW17 0QT

Study participating centre
Musgrove Park Hospital (taunton)
Musgrove Park Hospital
Taunton
United Kingdom
TA1 5DA

Study participating centre
Pinderfields Hospitals NHS Trust
Trust Hq, Rowan House
Pinderfields General Hospital
Aberford Road
Wakefield
United Kingdom
WF1 4EE

Study participating centre

Sunderland Royal Hospital
Kayll Road
Sunderland
United Kingdom
SR4 7TP

Study participating centre
Watford General Hospital
60 Vicarage Road
Watford
United Kingdom
WD18 0HB

Sponsor information

Organisation
University of Birmingham

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Sponsor type
University/education

Website
http://www.birmingham.ac.uk/index.aspx

ROR
https://ror.org/03angcq70

Funder(s)

Funder type
Government

Funder Name

National Institute for Health and Care Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Publication and dissemination plan
On completion of the trial, the data will be analysed, and a Final Study Report prepared. The final report will be published in a time defined by the contract between the Sponsor (BCTU) and the Funder (HTA). Outputs from this trial will be submitted for publication in peer reviewed journals and the findings of the trial will be made public.

Intention to publish date
31/12/2027

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be available upon request from the BCTU Data Sharing Committee following a formal Data Sharing Agreement (if applicable) email: abbrupt@trials.bham.ac.uk

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol file	version 1.0	11/10/2023	10/05/2024	No	No