Clinical trial results:
Tumescent Anaesthesia in Endovenous Laser Ablation of Varicose Veins: A Randomised Controlled Trial of a Buffered Tumescent Solution

Summary

EudraCT number	2011-005575-16
Trial protocol	GB
Global end of trial date	26 June 2014

Results information

Result version number	v1 (current)
This version publication date	18 December 2019
First version publication date	18 December 2019
Summary attachment (see zip file)	A Randomised Clinical Trial of Buffered Tumescent Local Anaesthesia During Endothermal Ablation for Superficial Venous Incompetence (R1270 A Randomised Clinical Trial of Buffered Tumescent Local Anaesthesia.pdf)

Trial information

Trial identification

Sponsor protocol code	BufferedTumescenceV4

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Hull University Teaching Hospitals NHS Trust
Sponsor organisation address	Anlaby Road, Hull, United Kingdom, HU3 2JZ
Public contact	Judith Long, Academic Vascular Surgical Unit, Hull Royal Infirmary, 01482 675784, judith.long@hey.nhs.uk
Scientific contact	Judith Long, Academic Vascular Surgical Unit, Hull Royal Infirmary, 01482 675784, judith.long@hey.nhs.uk

Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	29 June 2018
Is this the analysis of the primary completion data?	Yes
Primary completion date	26 June 2014
Global end of trial reached?	Yes
Global end of trial date	26 June 2014
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

The principle research objective is to determine whether the addition of sodium bicarbonate to tumescent anaesthesia results in less pain than conventional tumescent anaesthesia alone, when used during endovenous laser ablation of the Great Saphenous Vein.

Protection of trial subjects:

A Patient information sheet was developed to explain in lay terms what is involved in the study. Participation was entirely voluntary and there are no specific side-effects associated with the use of Sodium Bicarbonate in this setting.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 December 2011
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	United Kingdom: 97
Worldwide total number of subjects	97
EEA total number of subjects	97

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	83
From 65 to 84 years	12
85 years and over	2

Subject disposition

Recruitment

Recruitment details:

All patients with varicose veins undergo a thorough assessment in a Vascular Surgical outpatient clinic. Patients who have clinical evidence of varicose veins and meet the initial inclusion/exclusion criteria will then be made aware of this research study and provided with the appropriate information, including a Patient Information Sheet

Pre-assignment

Screening details:

Interested patients will attend a screening appointment with one of the study investigators in the Vascular Laboratory at Hull Royal Infirmary. At this appointment, the medical history and examination from the outpatient visit will be reviewed. If they have not done so already, patients will undergo a duplex venous ultrasound.

Period 1

Period 1 title	Baseline (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Single blind
Roles blinded	Subject

Blinding implementation details:

Prior to intervention, patients will be randomised to receive either buffered or unbuffered tumescent, using computer-generated random permuted block randomisation in a 1:1 ratio. This is a single-blinded trial; patients will be blinded to randomisation.

Arms

Are arms mutually exclusive?	Yes
Arm title	Buffered

Arm description:

Addition of 10ml of 8.4% sodium bicarbonate to 1l of standard tumescent anaesthetic solution.

Arm type	Active comparator
Investigational medicinal product name	Sodium Bicarbonate Injection BP 8.4% w/v
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Solution for injection
Routes of administration	Intravenous use

Dosage and administration details:

By slow intravenous injection or infusion. An amount appropriate to the body - base deficiency up to 300mmol. Plasma pH should be measured at regular intervals.

Arm title	Non Buffered

Arm description:

Received EVTA with standard non-buffered TLA (the control group)

Arm type	No intervention

No investigational medicinal product assigned in this arm

Number of subjects in period 1	Buffered	Non Buffered
Started	47	50
Completed	47	50

Baseline characteristics

Reporting groups	
Reporting group title	Buffered
Reporting group description:	
Addition of 10ml of 8.4% sodium bicarbonate to 1l of standard tumescent anaesthetic solution.	
Reporting group title	Non Buffered
Reporting group description:	
Received EVTA with standard non-buffered TLA (the control group)	

Reporting group values	Buffered	Non Buffered	Total
Number of subjects	47	50	97
Age categorical Units: Subjects			
Adults (18-64 years)	41	42	83
From 65-84 years	5	7	12
85 years and over	1	1	2
Age continuous Units: years			
median	49	54	
standard deviation	± 18	± 14.8	-
Gender categorical Units: Subjects			
Female	31	30	61
Male	16	20	36

End points

End points reporting groups

Reporting group title	Buffered
Reporting group description:	
Addition of 10ml of 8.4% sodium bicarbonate to 1l of standard tumescent anaesthetic solution.	
Reporting group title	Non Buffered
Reporting group description:	
Received EVTA with standard non-buffered TLA (the control group)	

Primary: Less perioprocedural pain

End point title	Less perioprocedural pain
End point description:	
End point type	Primary
End point timeframe:	
Patients followed-up at 1, 6, and 12 weeks post EVLA	

End point values	Buffered	Non Buffered		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	31	31		
Units: 100 mm				
number (not applicable)	31	31		

Statistical analyses

Statistical analysis title	Statistical Analysis Plan
Statistical analysis description:	
All continuous variables will be checked for normality using histograms and normality tests. Intergroup and intragroup comparisons will be performed using parametric tests for normally distributed variables. Log transformation will be performed for skewed variables to convert to a normal distribution for parametric testing. Non-parametric tests will be used if distribution remains skewed despite log transformation. Categorical variables will be compared using Chi-square and Fischer's exact test	
Comparison groups	Buffered v Non Buffered
Number of subjects included in analysis	62
Analysis specification	Pre-specified
Analysis type	other
P-value	< 0.05 [1]
Method	Mixed models analysis

Notes:

[1] - A p-value<0.05 was taken to indicate statistical significance. Univariate regression analyses were performed to assess for any confounding effect of the baseline parameters.

Adverse events

Adverse events information[1]

Timeframe for reporting adverse events:

Adverse events reported in accordance with Hull and East Yorkshire Hospitals NHS Trust R&D (HEY R&D) Safety Reporting standard operating procedures. Investigators will notify HEY R&D of serious adverse events within 24hrs.

Assessment type	Non-systematic

Dictionary used

Dictionary name	MedDRA
Dictionary version	17

Frequency threshold for reporting non-serious adverse events: 1 %

Notes:

[1] - There are no non-serious adverse events recorded for these results. It is expected that there will be at least one non-serious adverse event reported.
Justification: Full published results attached.

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
10 January 2014	Inclusion criteria amended to increase the applicability of results to all aspects of varicose vein endovenous treatment. Exclusion criteria to increase the applicability of results to all aspects of vv endovenous treatment. Additional statistical analysis paragraph to allow interim analysis.

Notes:

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

http://www.ncbi.nlm.nih.gov/pubmed/27306991