Clinical trial results:
Study: Reduces intravenous lidocaine the need for alfentanyl during colonoscopy under Procedural Sedation and Analgesia?

Summary

EudraCT number	2016-002210-46
Trial protocol	NL
Global end of trial date	27 November 2018

Results information

Result version number	v1 (current)
This version publication date	05 July 2020
First version publication date	05 July 2020
Summary attachment (see zip file)	Abstract (Abstract.pdf)

Trial information

Trial identification

Sponsor protocol code	LiSA

Additional study identifiers

ISRCTN number	ISRCTN47787339
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Radboud University Medical Centre
Sponsor organisation address	Geert Grooteplein Zuid 10, Nijmegen, Netherlands, 6525 GA
Public contact	Twan Aalbers, RadboudUMC, 0031 243614406, twan.aalbers@radboudumc.nl
Scientific contact	Twan Aalbers, RadboudUMC, 0031 243614406, twan.aalbers@radboudumc.nl

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	18 March 2019
Is this the analysis of the primary completion data?	Yes
Primary completion date	27 November 2018
Global end of trial reached?	Yes
Global end of trial date	27 November 2018
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

te evaluate whether continuous infusion of lidocaïne reduces the need for alfentanyl in diagnostic colonoscopy in patients with Crohn disease or ulcerative colitis.

Protection of trial subjects:

Patients will receive an intravenous line and are monitored with noninvasive systemic blood pressure, ECG,
pulse oximetry and capnografy. Supplemental oxygen (3 L/min) is standardly administered by a nasal cannula.
The Ramsey Sedation Scale scores will be maintained at 4-5 during colonoscopy and if needed, an additional 20 mg bolus of propofol is administered.
The pain score is measured with the Facial Pain Rating Scale (Wong baker face scale). An additional alfentanyl dose of 0.25 mg is given when a score of 4 or higher is observed.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	01 December 2016
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	Netherlands: 76
Worldwide total number of subjects	76
EEA total number of subjects	76

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)	76

From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

recruitment period: 24-11-2016, end 13-11-2018
Participants were recruited at the preoperative outpatient clinic of the anesthesiology, radboudumc, the Netherlands.

Pre-assignment

Screening details:

All patients with IBD, between 18 and 65 years, which are scheduled for a colonoscopy with PSA, will be screened for this study.
assessed for eligibility 137 patients

Pre-assignment period milestones

Number of subjects started	76
Number of subjects completed	76

Period 1

Period 1 title	end of trail (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Investigator, Subject, Monitor

Blinding implementation details:

Medication is drawn up into a 50 ml syringe on the surgical department by a qualified unblinded research
team member immediately before administration and handed over to the physicain assistant.

Arms

Are arms mutually exclusive?	Yes
Arm title	placebo

Arm description: -

Arm type	Placebo
Investigational medicinal product name	Natriumchloride 0,9 %,
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Suspension for injection in pre-filled syringe
Routes of administration	Intravenous use

Dosage and administration details:

The placebo group will receive saline in equivalent volumes and time as the intervention group: bolus 0.15 ml/kg followed by a continuous infusion of 0.2 ml/kg during colonoscopy

Arm title	lidocaine

Arm description: -

Arm type	Active comparator
Investigational medicinal product name	Lidocaïnehydrochloride 10 mg/ml
Investigational medicinal product code	PR1
Other name	
Pharmaceutical forms	Solution for infusion in pre-filled syringe
Routes of administration	Intravenous use

Dosage and administration details:

The intervention group receives lidocaine 1.5 mg/kg in 5 minutes followed by a continuous infusion of 2 mg/kg/hour body weight intravenously

Number of subjects in period 1	placebo	lidocaine
Started	38	38
Completed	38	38

Baseline characteristics

Reporting groups	
Reporting group title	placebo
Reporting group description: -	
Reporting group title	lidocaine
Reporting group description: -	

Reporting group values	placebo	lidocaine	Total
Number of subjects	38	38	76
Age categorical Units: Subjects			
Adults (18-64 years)	38	38	76
Age continuous Units: years			
arithmetic mean	38	37	
standard deviation	± 11	± 14	-
Gender categorical Units: Subjects			
Female	17	15	32
Male	21	23	44
Disease Units: Subjects			
Crohn	31	31	62
Colitis ulcerosa	7	7	14
BMI Units: kg.m-2			
arithmetic mean	25.2	24.2	
standard deviation	± 4.3	± 3.1	-
Duration of PSA Units: minutes			
arithmetic mean	33	32	
standard deviation	± 10	± 10	-

Subject analysis sets	
Subject analysis set title	placebo
Subject analysis set type	Full analysis
Subject analysis set description: placebo	
Subject analysis set title	lidocaine
Subject analysis set type	Full analysis
Subject analysis set description: lidocaine 1.5 mg/kg in 5 minutes followed by a continuous infusion of 2 mg/kg/hour body weight intravenously	

Reporting group values	placebo	lidocaine	
Number of subjects	38	38	
Age categorical Units: Subjects			
Adults (18-64 years)	38	38	
Age continuous Units: years arithmetic mean standard deviation	± ±		
Gender categorical Units: Subjects			
Female Male			
Disease Units: Subjects			
Crohn Colitis ulcerosa			
BMI Units: kg.m-2 arithmetic mean standard deviation	± ±		
Duration of PSA Units: minutes arithmetic mean standard deviation	± ±		

End points

End points reporting groups

Reporting group title	placebo
Reporting group description: -	
Reporting group title	lidocaine
Reporting group description: -	
Subject analysis set title	placebo
Subject analysis set type	Full analysis
Subject analysis set description: placebo	
Subject analysis set title	lidocaine
Subject analysis set type	Full analysis
Subject analysis set description: lidocaine 1.5 mg/kg in 5 minutes followed by a continuous infusion of 2 mg/kg/hour body weight intravenously	

Primary: Alfentanil dosage

End point title	Alfentanil dosage
End point description:	
End point type	Primary
End point timeframe: End of procedure	

End point values	placebo	lidocaine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	38	38		
Units: microgram(s)				
arithmetic mean (standard deviation)	868 (± 647)	632 (± 519)		

Statistical analyses

Statistical analysis title	overall analysis
Comparison groups	placebo v lidocaine
Number of subjects included in analysis	76
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.082
Method	t-test, 2-sided

Secondary: Propofol dosage

End point title	Propofol dosage

End point description:

End point type	Secondary

End point timeframe:
end of procedure

End point values	placebo	lidocaine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	38	38		
Units: milligram(s)				
arithmetic mean (standard deviation)	387 (± 106)	349 (± 85)		

Statistical analyses

Statistical analysis title	propofol

Statistical analysis description:
propofol dosage

Comparison groups	placebo v lidocaine
Number of subjects included in analysis	76
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.095
Method	t-test, 2-sided

Secondary: hypoxia

End point title	hypoxia

End point description:

End point type	Secondary

End point timeframe:
end of procedure

End point values	placebo	lidocaine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	38	38		
Units: number of incidence	10	8		

Statistical analyses

Statistical analysis title	hypoxia

Statistical analysis description:

incidence of hypoxia,
An oxygen desaturation below 92% or
interventions with the intention of improving the oxygen saturation will be recorded as an adverse event.[13]
These interventions include the following:
Vigorous tactile stimulation
Airway repositioning
Suctioning
Increased oxygen delivery
Oral or nasal airway placement
Application of positive pressure or ventilation with bag mask

Comparison groups	placebo v lidocaine
Number of subjects included in analysis	76
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.788
Method	Chi-squared

Secondary: hypotension

End point title	hypotension

End point description:

End point type	Secondary

End point timeframe:

end of procedure

End point values	placebo	lidocaine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	38	38		
Units: number of incidence	0	0		

Statistical analyses

No statistical analyses for this end point

Secondary: postcolonoscopy pain

End point title	postcolonoscopy pain

End point description:

End point type	Secondary

End point timeframe:

end of procedure

End point values	placebo	lidocaine		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	38	38		
Units: NRS score				
arithmetic mean (full range (min-max))	0 (0 to 8)	0 (0 to 8)		

Statistical analyses

No statistical analyses for this end point

Adverse events

Adverse events information	
Timeframe for reporting adverse events: from start of procedure to at least 30 minutes after procedure	
Assessment type	Systematic

Dictionary used	
Dictionary name	castor
Dictionary version	1

Reporting groups	
Reporting group title	placebo
Reporting group description: -	
Reporting group title	lidocaine
Reporting group description: -	

Serious adverse events	placebo	lidocaine	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 38 (0.00%)	0 / 38 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	placebo	lidocaine	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	10 / 38 (26.32%)	8 / 38 (21.05%)	
Respiratory, thoracic and mediastinal disorders			
hypoxia	Additional description: SpO2 < 92 %		
subjects affected / exposed	10 / 38 (26.32%)	8 / 38 (21.05%)	
occurrences (all)	38	38	

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

Procedures were performed by several endoscopist and we did not include technically difficulty as a variable since this can be related to uncomfortable procedure.(22) This could have influenced our conclusions regarding the effect of lidocaine on al

Notes: