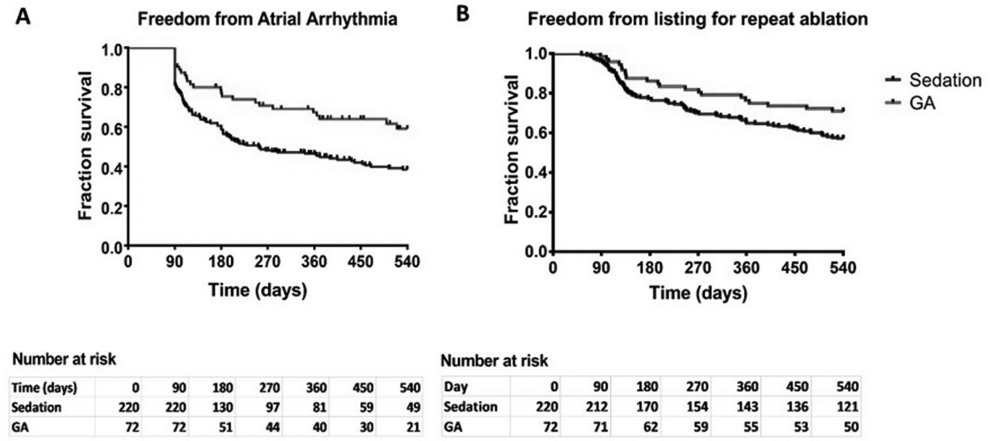

Abstract 34 Figure 1

freedom from recurrence of atrial arrhythmia and freedom from listing for repeat ablation at 18 months. Clinical assessments, 12 lead ECGs and 24 hour Holter monitors were obtained at baseline and at 3, 6, 12 and 18 months.

Results Baseline characteristics were not significantly different between groups. Freedom from atrial arrhythmia was higher in patients under GA rather than CS (63.9% vs 42.3%, HR 1.87, 95% CI: 1.23 to 2.86, p=0.002) (figure 1A). There was no difference in procedure time and ablation time between groups. There were no complications resulting from use of GA; 5 cases under CS were hindered by airway problems, agitation or pain.

Significantly fewer GA patients were listed for repeat procedures (29.2% vs 42.7%, HR 1.62, 95% CI: 1.01 to 2.60, p=0.044 (figure 1B)). Of patients who had arrhythmia recurrence but did not undergo repeat ablation, main reasons were: only occasional recurrences of paroxysmal AF (PAF) (39%), feeling subjectively better despite continuing AF (20%), or low chance of success from further procedures (17%) (figure 2).

Multivariate Cox regression analysis found a higher freedom from atrial arrhythmia with use of GA, as well as for decreasing age, normal LA size and decreasing time in AF pre-procedure. Decreasing age and use of GA increased the likelihood of freedom from listing for repeat ablation. A PeAF procedure under GA in our institution is slightly more expensive than under CS (£4406.68 vs £4115.15), but due to lower redo rates, the cost after a maximum of two procedures is lower with GA, with an average saving of £178.88 per patient.

Conclusions Using GA to perform PeAF ablation is both clinically and financially effective.

Patient immobility leads to improved accuracy of mapping and catheter stability, and optimises lesion quality. Ablating during apnoea has been shown to improve contact force (1) and a single previous study has demonstrated better outcomes for paroxysmal AF ablation under GA (2). However GA may be of particular use for PeAF, where more extensive substrate ablation may be employed, procedures last longer and DCCV is often required.

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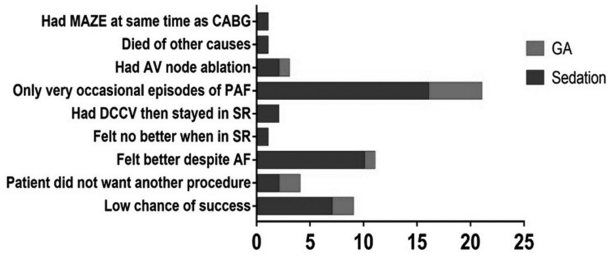

Abstract 34 Figure 2

35 UK MULTI-CENTRE REGISTRY OF TRANSVENOUS LEAD EXTRACTION: CLINICAL OUTCOME USING DIFFERENT TECHNIQUES

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10.1136/heartjnl-2017-311726.35

Introduction With increasing numbers and complexity of implantable devices, the need for lead extraction is also increasing. There is little UK data available on clinical outcomes. We compiled a multi-centre registry of patients undergoing lead extraction to investigate predictors of success and complications.

Methods Data on all cases at three UK tertiary centres (St. Barts and The Heart Hospital London and Papworth Hospital Cambridge) were collected over 18 months. Cases where leads were >1 year in age or where specialist extraction equipment was used were included (cases=137, leads=268).

Results 69% of patients were male, age 66±16 years (mean ±SD). Devices extracted were single chamber PPMs (5%), dual chamber PPMs (42%), CRTPs (6%), single chamber ICDs (6%), dual chamber ICDs (17%) and CRTDs (24%). 76% of ICD leads were dual coil. Number of leads extracted per patient was 2.0±1.0 and time from implantation was 8.3 ±11.1 years. Leads were extracted using simple traction (39%), traction with locking stylets alone (8%) or dilator

Abstract 35 Table 1

		Uncomplicated extraction (%)	Major AE due to procedure (%)	Major AE not due to procedure (%)	Minor AE (%)	Procedural failure (%)	>4 cm lead remaining (%)
Reason extracted	Pocket infection	59 (87)	0 (0)	0 (0)	9 (13)	2 (3)	2 (3)
	Box erosion	43 (86)	3 (6)	0 (0)	4 (8)	1 (2)	0 (0)
	Systemic infection	**36 (69)[a]**	0 (0)	**6 (12)[a]**	**10 (19)[a]**	**5 (24)[c]**	0 (0)
	Lead failure	72 (90)	2 (3)	0 (0)	6 (8)	4 (2)	4 (2)
	Other	17 (94)	0 (0)	0 (0)	1 (6)	0 (0)	0 (0)
Technique	Simple traction	97 (92)	3 (3)	2 (2)	3 (3)	2 (2)	1 (1)
	Assisted traction	**26 (70)[b]**	0 (0)	1 (3)	**10 (27)[b]**	3 (8)	2 (5)
	Cutting sheath	91 (91)	0 (0)	3 (3)	7 (7)	7 (7)	3 (3)
	Laser	**18 (72)[b]**	2 (8)b	0 (0)	**5 (20)[b]**	0 (0)	0 (0)

sheaths (5%), bidirectional cutting sheaths (38%) or laser (10%). Only 2% of cases required additional femoral access. Specialist equipment was preferentially used for older leads (10.4±13.1 vs 5.2±5.8 years, p<0.001) and for ICD leads (84% vs 53%, p<0.001).

The rate of major procedural adverse events (AE) leading to death or emergent surgery was 2.2%, major AEs unrelated to the procedure was 5.8% and minor AEs was 8.7%. Predictors of AEs include patient age (77±28 vs 66±15 years, p=0.05), the age but not type or number of lead (14.8 ±24.5 vs 7.2±6.0 years, p=0.01), systemic infection[a](31 vs 8%, p<0.001), increased creatinine level (142±111 vs 108 ±23 μmol/L, p=0.011), decreased haemoglobin level (109 ±23 vs 123±24 g/L, p=0.001) and use of assisted traction or laser over simple traction or mechanical cutting sheaths[b] (p=0.001) – see Table. Complete extraction was achieved in 95.5% of leads, with only 2.2% with >4 cm of lead remaining *in situ*. Predictors of procedural failure include age but not type or number of leads (11.1±8.6 vs 8.3±11.3 years, p=0.05), systemic infection[c](24 vs 3%, p<0.001) and increased creatinine (162±126 vs 108±66 μmol/L, p=0.012). Laser extraction resulted in 100% success in removing leads. Gender, procedure duration, fluoroscopy time and dose, use of general anaesthesia or temporary pacing was independent of extraction technique and outcome.

Discussion This is the first UK prospective multi-centre study of lead extraction data comparing extraction techniques. Overall there is a low major complication and high success rate with the use of either simple traction or specialist equipment. From our findings, high risk cases can be identified pre-procedure to allow adequate case planning. Laser extraction is clinically effective but is associated with a higher complication rates compared with mechanical cutting sheaths.

36 FIVE YEARS ON – FAILURE TO APPLY 2010 NICE SYNCOPE GUIDELINES IN A LONDON TERTIARY CENTRE

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10.1136/heartjnl-2017-311726.36

Introduction NICE have recommended clear pathways for assessment of patients with transient loss of consciousness (TLoC), with the aim of reducing unnecessary investigations, the length of hospital admission and aiming for early specialist assessment and better patient outcomes.

Methods A retrospective analysis of electronic case records for all patients referred by A and E for medical assessment in King's College Hospital in July and August 2015 was performed in August 2016. To capture all potential patients, any referral including the words fall, collapse, seizure, syncope, LoC, cardiac arrest or blackout were screened. Patients who did not have TLoC were excluded based on prespecified criteria. The remaining patient records were evaluated against the 2010 NICE guideline audit tool.

Results 2101 patients were referred over 2 months. 192 (9%) were possible TLoC on the basis of the initial referral. After medical assessment, 147 patients were found not to have TLoC. The most common reasons were absence of LoC (75 pts), epileptic seizure with known epilepsy (24 pts) and drug or alcohol intoxication (17 pts). After screening, there were 45 patients (2%,) with potential TLoC.

No patient with TLoC had the all the NICE-mandated minimum data recorded. Unrecorded data included high risk features that should be the basis for TLoC admissions; family history of premature death (40%), collapse during exertion (20%), new or unexplained dyspnoea (18%).

Although 82% had a CXR and 76% received CT head, 84% had no recorded postural BP and 24% had no record of an ECG. Only 16% were referred for inpatient evaluation by a cardiologist.

The mean length of stay was 7 days, equivalent to 5 bed-years on an annualised basis. However, 20% were discharged without a diagnosis, and 36% did not have any outpatient follow up.

Conclusions Despite clear guidelines, syncope patients still do not receive appropriate initial evaluation, investigation or diagnosis, even in a large tertiary centre with ready access to specialist assessment. Hospital length of stay is long, yet simple diagnostic tests (such as ECGs and postural BPs) are commonly not performed.

Screening of all medical referrals based on simple criteria results in a relatively small number of patients with TLoC. Early specialist involvement in patients with syncope would be practically feasible, and would potentially result in better patient outcomes.