

Table 1- Baseline characteristics

No	Age	Gender	Underlying structural heart disease	PPM Indication	DM	HTN	IHD	LVEF	CSP +/- CRT	Result
1	65	M	Ischemic cardiomyopathy	CHB with RBBB morphology escape	No	No	Yes	22	HOT CRT	S- HBP
2	68	M	Rheumatic Heart Disease	Atypical Afl- intermittent CHB	Yes	No	No	46	HBP	NS-HBP
3	71	F	None	Intermittent AV block	Yes	Yes	No	58	HBP	NS-HBP
4	57	M	Non ischemic cardiomyopathy	Sinus rhythm with LBBB	No	No	No	28	HOT CRT	S- HBP
5	55	F	None	2:1 AV block with narrow QRS	Yes	Yes	Yes	60	HBP	NS-HBP
6	80	F	None	2:1 AV block with narrow QRS	Yes	Yes	No	65	HBP	NS-HBP
7	57	M	None	Degenerative high grade AVB	No	Yes	No	44	HBP	NS-HBP
8	75	M	None	2:1 AV block	Yes	Yes	Yes	61	LBBaP	S-LBBaP
9	50	F	None	Sick sinus syndrome	Yes	Yes	Yes	60	LBBaP	NS- LBBaP
10	65	F	Hypertensive Heart disease	Persistent AF- Post AVN ablation	No	Yes	No	55	HBP	NS-HBP
11	53	M	Non ischemic cardiomyopathy	Sinus rhythm with LBBB	No	No	No	28	HOT CRT	NS- HBP
12	59	M	Hypertensive Heart Disease	Sick Sinus Disease	Yes	Yes	No	60	HBP	NS-HBP
13	63	M	Ischemic Cardiomyopathy	Sick sinus syndrome	Yes	Yes	Yes	35	HOT-CRT	S- HBP
14	62	M	Ischemic cardiomyopathy	VT storm	No	No	Yes	28	LOT-ICD (Changed to LLL)	NS- LBBaP
15	62	F	None	CHB with LBBB escape	No	Yes	Yes	60	LBBaP	NS-LBBaP
16	87	M	None	High grade AV block with RBBB escape	No	Yes	Yes	55	LBBaP	Septal
17	71	F	None	CHB with RBBB escape	Yes	Yes	No	56	RVaP	RVaP
18	81	M	None	CHB with Junctional escape	Yes	Yes	No	55	HBP	NS- HBP
19	62	M	None	Sick Sinus syndrome	Yes	No	No	60	LBBaP	NS-LBBaP
20	82	M	None	CHB with RBBB escape	Yes	Yes	No	56	Septal	Septal
21	64	F	None	High grade AV block with Narrow QRS escape	Yes	Yes	No	56	LBBaP	NS- LBBaP
22	79	M	None	CHB with RBBB escape	No	Yes	No	27	LBBaP	S- LBBaP
23	52	F	none	CHB with Narrow	No	Yes	No	54	HBP	NS- LBBaP
24	83	M	Non ischemic cardiomyopathy	CHB with RBBB escape	Yes	Yes	No	44	HBP	NS-HBP
25	69	M	Ischemic cardiomyopathy	CHB with narrow escape	Yes	Yes	Yes	51	HBP	Septal
26	57	F	None	High grade AV block with Narrow QRS escape	No	No	No	50	LBBaP	S- LBBaP
27	60	F	None	Sick Sinus Disease	No	No	No	55	LBBaP	NS- LBBaP
28	62	F	None	Paroxysmal AV block	Yes	Yes	No	52	LBBaP	NS- LBBaP
29	76	M	None	Intermittent CHB- Infrahisian	Yes	No	No	53	LBBaP	NS- LBBaP
30	67	F	None	High Grade AV block	Yes	Yes	No	54	LBBaP	NS- LBBaP
31	62	M	Ischemic cardiomyopathy	Degenerative CHB with alternative BBB escape rhythm	Yes	Yes	Yes	54	LBBaP	Septal
32	80	F	Ischemic cardiomyopathy	Degenerative CHB, RBBB escape rhythm	No	Yes	Yes	55	HBP	NS- HBP
33	66	M	None	Degenerative CHB, LBBB escape rhythm	Yes	No	Yes	54	HBP	NS-HBP
34	61	M	Ischemic cardiomyopathy	Sick Sinus syndrome	No	Yes	Yes	60	HBP	S-HBP
35	62	F	None	CHB with narrow escape	Yes	Yes	No	60	LBBaP	NS-LBBaP
36	81	F	None	2:1 AV block with RBBB escape	No	Yes	No	54	LBBaP	NS-LBBaP
37	68	M	Ischemic cardiomyopathy	High grade AV block with Narrow QRS escape	Yes	Yes	Yes	32	HOT-ICD	NS-HBP

CHB- Complete Heart Block, RBBB- Right Bundle Branch Block, LBBB- Left Bundle Branch Block, AVB- Atrioventricular Block, HBP- His Bundle Pacing, LBBaP- Left Bundle Branch area Pacing, HOT-CRT- His Bundle Pacing optimized Cardiac Resynchronisation Therapy, S- Selective, NS- Non- Selective, LOT-ICD- Left Bundle area Pacing optimized Cardiac Resynchronisation Therapy, RVaP- Right Ventricular apical Pacing, VT- Ventricular Tachycardia

Table 2- Implant characteristics

No.	Anaesthesia	CSP +/- CRT	Result	His/LB signal on lead	Capture	Sensed R	QRSd (ms)		Complication	Procedure Time (min)	Fluoroscopy time (min)
					Threshold @0.4ms (V)	(mV)	Pre	Post (VVI)			
1	GA	HOT CRT	S- HBP	Yes	1.25	4	147	116	No	138	74.5
2	LA	HBP	PHP	No	2.5	10.1	140	142	No	98	79.2
3	LA	HBP	NS-HBP	Yes	1	0	100	110	No	100	28.3
4	LA	HOT CRT	S- HBP	Yes	2	0	152	136	No	89	47.5
5	LA	HBP	NS-HBP ^a	Yes	0.5	7	85	123	Yes (Macro-Dislodgement<24h)	95	22.9
6	LA	HBP	NS-HBP	Yes	1	3.1	88	115		90	16.8
7	LA	HBP	NS-HBP	Yes	1.1	7.4	96	124		106	36.1
8	LA	LBBAP	S-LBBaP	No	2	7.4	120	110	No	70	18.4
9	AL	LBBAP	NS- LBBaP	Yes	1	9	94	92	No	84	30.2
10	LA	HBP	NS-HBP	Yes	1	6	80	110	No	99	58.9
11	LA	HOT CRT	S- HBP	Yes	2	0	152	130	No	89	47.5
12	LA	HBP	NS-HBP	Yes	1	9	84	100	Yes (Macro-Dislodgement<24h)	90	60.8
13	LA-GA	HOT-CRT	S- HBP ^b	No	1	9	100	90		108	24.5
14	LA	LOT-ICD (Changed to MDT LLL)	NS- LBBaP ^c	No	0.5	7.6	170	149		102	85.6
15	LA		NS-LBBaP ^d	No	0.75	9	128	120	No	126	47.6
16	LA		Septal ^e	No	1.5	5	140	140	No	130	36.5
17	LA	LBBaP	RVaP ^d	No	1.7	7	120	140	No	152	46.6
18	LA	HBP	NS- HBP	No	0.6	5.2	100	110	No	65	25.6
19	LA	LBBaP	NS-LBBaP	No	1	6	90	110	No	72	45
20	LA	LBBaP	Septal ^e	No	0.6	5	130	120	No	94	19.9
21	LA	LBBaP	NS- LBBaP	No	1.1	6	90	120	No	91	57.6
22	LA	LBBaP	S- LBBaP	No	0.6	4.6	150	110	No	73	30.5
23	LA	HBP	NS- LBBaP	No	0.7	8	100	120	No	124	44.7
24	LA	HBP	NS-HBP	No	0.9	9	150	110	No	90	45
25	LA	HBP	Septal ^e	No	1	5	110	120	No	110	47.9
26	LA	LBBaP	S- LBBaP	Yes	0.7	12	110	100	No	100	43.6
27	LA	LBBaP	NS- LBBaP	Yes	1	10.4	108	100	No	110	25.4
28	LA	LBBaP	NS- LBBaP	Yes	1.2	5.4	135	110	No	110	24.9
29	LA	LBBaP	NS-LBBaP	Yes	0.75	12	153	110	No	90	69.1
30	LA	LBBaP	Septal ^e	No	0.7	7	122	140	No	100	49.3
31	LA	LBBaP	LBBaP	Yes	1.5	13.2	145	124	No	88	28.3
32	LA	HBP	NS-HBP	Yes	0.75	4.3	140	142	No	94	74.5
33	LA	HBP	NS-HBP	Yes	2	5.2	140	143	No	85	23.7
34	LA	HBP	S-HBP	Yes	3.2	3	100	90	No	84	18.8
35	LA	LBBAP	S-LBBaP	Yes	0.7	5.6	153	120	No	100	43.6
36	LA	LBBAP	S-LBBaP	Yes	1	9	130	110	No	94	75.4
37	LA	HOT-ICD	NS-HBP ^f	No	1	4.5	100	120	Yes (Micro- Dislodgement<24h)		

HBP- His Bundle Pacing, LBBaP- Left Bundle Branch area Pacing, HOT-CRT- His Bundle Pacing optimized Cardiac Resynchronisation Therapy, S- Selective, NS- Non- Selective, LOT-ICD- Left Bundle area Pacing optimized Cardiac Resynchronisation Therapy, RVaP- Right Ventricular apical Pacing, VT- Ventricular Tachycardia

a- Dislodgement, changed to RV apical pacing

b- Succumbed to Non- arrhythmia issues (Multiple Co-morbidities, Acute on Chronic Kidney injury)

c- Deep penetration could not be obtained with Tendril. Finally changed to MDT 3830 lead delivered through His315 sheath, septal capture

d- CS capture not attainable, changed to RVaP

e- Conduction system capture not possible changed to Septal Pacing

f- Microdislodgement noted on post- procedure day 1, Lead revised to LBBaP with LLL (3830), delivered through His315 sheath

Table 3- Follow-up characteristics

Case	QRSd (ms)		R waves (mV)		Pacing Impedance (ohms)		Pacing Threshold (V) at 0.4 ms		LVEF (%)		Complications	
	At implant	At F/U	At implant	At F/U	At implant	At F/U	At implant	At F/U	At Implant	At F/U	Threshold rise >1V	Lead dislodgement
1	116	120	4	4	810	700	3.25	2.75	22	22	No	No
2	142	138	10.1	-	640	510	2.5	0.5	46	46	No	No
3	110	114	0	6.5	440	390	1	0.75	58	58	No	No
4	136	138	0	2	500	340	2	1.5	28	28	No	No
5	130	130	7	5.7	500	490	0.5	1	60	60	No	No
6	115	110	3.1	3.1	540	270	1	0.5	65	65	No	No
7	124	138*	7.4	10.8	740	490	1.1	0.75	44	44	No	No
8	110	110	7.4	10.8	522	460	2	0.5	61	61	No	No
9	92	90	9	9	520	600	1	0.75	60	60	No	No
10	110	110	6	5.1	370	440	1	0.5	55	55	No	No
11	130	130	0	2	500	340	2	1.5	28	28	No	No
12	90	90	9	4.1	520	430	1	0.5	-	64	No	No
13	90	-	9	-	420	-	1	-	35	-	-	-
14	149	145	7.6	7.6	690	690	0.5	0.5	28	28	No	No
15	120	120	9	9.7	490	444	0.75	0.75	60	60	No	No
16	140	140	5	7	510	540	1.5	0.75	55	55	No	No
17	140	140	7	7	510	540	1.5	0.75	55	55	No	No
18	110	110	5.2	10	350	400	1.7	0.75	56	56	No	No
19	110	110	6	12	512	390	0.6	0.5	55	55	No	No
20	120	120	5	12	412	430	1	1	60	60	No	No
21	120	120	6	0	430	440	0.6	0.75	56	56	No	No
22	110	110	4.6	0	466	440	1.1	0.75	56	56	No	No
23	120	120	8	0	410	430	0.6	1	53	53	No	No
24	110	110	9	12	437	390	0.7	0.5	54	54	No	No
25	120	120	5	2.3	650	380	0.9	0.7	44	44	No	No
26	100	100	12	0	460	380	1	0.5	51	51	No	No
27	100	100	10.4	12	510	350	0.7	0.75	50	50	No	No
28	110	140	5.4	12	540	360	1	1.25	55	55	No	No
29	110	140	12	12	340	430	1.2	0.75	52	52	No	No
30	140	140	7	12	550	440	0.75	0.5	51	51	No	No
31	124	124	5.7	15	410	440	1	0.75	56	55	No	No
32	142	142	7.8	11	374	400	1.2	0.5	55	54	No	No
33	143	143	5.2	8	700	650	2	1.5	54	54	No	No
34	90	90	3	4.5	600	650	3.2	2.2	55	55	No	No
35	120	120	5.6	13	560	410	0.75	0.5	60	60	No	No
36	110	120	9	6.1	554	610	1	0.5	60	54	No	No
37	120	90+	4.5	8.2	650	620	0.8	1	35	40	No	No

*- lost conduction system capture on follow up

*- Result of LBBaP after lead revision