further evidence against an ischaemic aetiology. Treatment options for this syndrome include negatively chronotropic medications and patient education to avoid the heart rate exceeding the threshold at which LBBB develops. However, this was not feasible in our case due to a resting bradycardia and the condition occurring at rest. Theoretically, using HBP to correct LBBB appears counterintuitive, as it is pacing proximal to the point of abnormal conduction. Despite this, it has a proven success rate in the treatment of LBBB [8] and does appear to be a management option that can offer a striking resolution of symptoms in select patients with this unusual and still poorly understood condition.

**Conflict of Interest** None

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### Abstract 104

**Title**: REWORKING THE POST-COVID WAITING LIST – THE PATIENT EXPERIENCE OF IMPLANTABLE LOOP RECORDER EXPLANTATION

**Authors**: Rahul Chattopadhyay, Mina Fares, Mrinal Thakur, Priyadarshini Bhattacharjee, Julie Hayes, Panagiota Anna Chousou, Peter J Pugh. Cambridge University Hospital, Cambridge, UK

**Introduction** The Covid-19 pandemic has put a considerable strain on procedural waiting lists, with the majority of elective outpatient work cancelled during the pandemic. With the vaccination programme and reducing infection levels, attention is turning to addressing these waiting lists. One procedure that was affected was the removal of implantable loop recorders (ILRs). Manufacturers recommend that ILRs are removed at the point of battery depletion (usually 3-4 years), if they have not already been removed due to a positive finding or patient preference. There is little evidence in the literature regarding late complications with ILRs, and we therefore wished to examine what patients’ thoughts would be about keeping the ILR in for a longer period of time.

**Methods** Patients awaiting ILR explantation and those who had undergone explantation, were identified. A retrospective review of the notes was used to get demographic and clinical data. Both groups of patients were contacted, and a questionnaire used to gain an understanding of patients’ experience and expectations.

**Results** Prior to the Covid-19 pandemic, 60 patients who had undergone ILR explantation were identified. A total of 22 responded to our questionnaire (table 1). The majority (86%) were happy to have their ILR removed, although a smaller majority (59%) would also have been happy to have had the device kept in, were it felt to be safe. Very few patients felt a tangible difference as a result of having the ILR removed (14%) and no patients were worried about the waiting time prior to Covid-19. Of 77 patients currently awaiting explant, 30 responded to our questionnaire (table 1), with 70% not being concerned by the wait for removal. This is likely aided by the fact that 80% of patients had no day to day symptoms as a result of the ILR. Half of the patients however, would be concerned about not having the ILR removed, predominantly due to mild discomfort or concerns regarding the presence of a battery. Across both groups (n=52) only 8 patients were concerned about the risk of coming into the hospital for the procedure, with patients commenting that the stringent regulations that hospitals had employed combined with the vaccination programme, gave them significant confidence in attending for outpatient procedures.

**Conclusions** This study found that if patients are reassured about the safety of keeping an implantable loop recorder in, and do not suffer any discomfort or symptoms as a result of the device, they are happy both to wait longer for device removal, or even not have it removed at all. In the context of the current pandemic, more thought should perhaps be given to patient guided removal times, especially in cases of removals performed for battery depletion.

**Conflict of Interest** Nil

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### Abstract 105

**Title**: EVALUATING LONG TERM PERFORMANCE OF MICRA VA LEADLESS PACEMAKER

**Authors**: 1Omar Shaligh, 2Sandra Silva, 2Berkay Karahacioglu, 2Patrick Heck, 2David Begley, 1Claire Martin. 1Papworth, Bedford, UK; 2Royal Papworth NHS Foundation Trust

**Background** The Micra VA (leadless) pacemaker was approved by the FDA for use in 2016. Whilst initial studies evaluated the safety and efficacy of the device for a mean follow up of 12 months, very few studies have evaluated complications and device function beyond 1 year. Objective: To evaluate the short and long term complication rate and device function associated with the Micra VA (leadless) pacemaker at our centre.

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**Table 1** Summary of characteristics for each group of patients

<table>
<thead>
<tr>
<th></th>
<th>Waiting list</th>
<th>Explanted</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>Male (%)</td>
<td>17 (57%)</td>
<td>10 (45%)</td>
</tr>
<tr>
<td>Age/years</td>
<td>56.3 ±14.9</td>
<td>60.6 ±16.3</td>
</tr>
<tr>
<td>Average duration of ILR / years</td>
<td>4.3 ±1.53</td>
<td>2.1 ±1.28</td>
</tr>
<tr>
<td>Average time from listing / years</td>
<td>1.21 ±0.40</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 2** Summary of questionnaire responses

<table>
<thead>
<tr>
<th></th>
<th>Was the patient concerned about the waiting time?</th>
<th>Did the ILR result in a day to day on the patient?</th>
<th>Did the explant lead to a tangible change for the patient?</th>
<th>Would the patient be happy to keep the ILR in?</th>
<th>If not happy, is this due to discomfort?</th>
<th>If not happy, is this due to concerns about the device/battery itself?</th>
<th>Was the patient concerned about attending hospital due to the pandemic/lockdown?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>9 (30%)</td>
<td>6 (20%)</td>
<td>-</td>
<td>15 (50%)</td>
<td>7 (20%)</td>
<td>4 (14%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>0 (0%)</td>
<td>-</td>
<td>3 (14%)</td>
<td>-</td>
<td>1 (40%)</td>
<td>0 (0%)</td>
<td>7 (32%)</td>
</tr>
</tbody>
</table>

**Notes**

1Papworth, Bedford, UK

**Conflict of Interest** None
Methods A prospective analysis of all Micra VA implants performed at Royal Papworth Hospital was carried out. This included pacing checks for up to 24 months post device insertion, evaluating complications and specifically noting thresholds and R-wave amplitude changes.

Results A total of 24 Micra leadless pacemakers were implanted at our centre between 2017 and 2020. The age range for the patients was 37 to 92 years, mean age 71 ± 13 yrs. 8 out of 24 (33%) patients had poor venous access, with bilateral subclavian obstruction, requiring the use of a leadless pacemaker. 2 out of 24 had bilateral previous pacemaker infections and extraction. For the remaining patients, 12/24 (50%) had atrial fibrillation with slow ventricular response as the primary indication for the device. 6 out of 24 (25%) patients had a history of LV impairment (4 patients severe LVSD, 2 moderate LVSD). One patient had a previous cardiac transplant. The implant was successful for all patients. One patient required the procedure to be repeated under general anaesthetic as she did not tolerate the insertion of the femoral sheath under sedation. 2 patients (8%) required repositioning of the device during the case, as initial placement was unsatisfactory. 23/24 patients had the device placed in the septum and 1 patient in the RV apex. This patient had undergone multiple previous tricuspid valve surgeries, which made septal positioning challenging, and so an apical placement was accepted. Mean procedure time was 62 ± 16 mins. Mean fluoroscopy time was 5.8 ± 4.2 mins. Implant threshold was 0.6 V ± 0.4 V. Threshold at 1 year follow up was 0.5 V ± 0.2 V and 0.6 V ± 0.2 V at 2 years. Paired T testing showed no statistically significant difference in threshold values at implant, and year 1 (p = 0.7, n =13), or implant and year 2 (p = 0.78, n =6). The R wave at implant was 9.5 ± 4.1mV, and 9.8 mV ± 2.5mV at year 1, again with no statistically significant difference (p = 0.87, n = 13). Mean battery life at 2 year follow up was 7 ± 0.5 years. Pacing percentages varied from 0.1% to 99.99%.

Conclusion Although are numbers are small, particularly for follow up over 2 years (n = 6), the initial results are encouraging, and support a low complication rate, and no evidence of premature battery failure or issues with device threshold requiring re-intervention. It is imperative that further studies are carried out to give a picture of longer term follow up for the leadless Micra VA pacemaker focussing on these two key issues.

Conflict of Interest nil