non-invasive imaging can facilitate the diagnosis, but tissue biopsy remains the gold standard for both obtaining a definitive diagnosis of amyloidosis and classifying the amyloid subtype. Since patients undergoing CIED implantation are often older and have electrical or structural heart disease, we postulated that tissue biopsy of the subcutaneous pocket during device implantation may allow for facile detection of otherwise undiagnosed amyloidosis.

**Objective:** To evaluate the feasibility of adipose tissue sampling from the chest wall pocket during CIED implantation.

**Methods:** Patients with clinical/imaging characteristics suggestive of amyloidosis, but without a diagnosis, underwent excisional biopsy of chest wall subcutaneous adipose tissue from the newly created CIED pocket at the time of device implant (Figure). Samples were analyzed with Congo red staining and mass spectrometry for subtyping.

**Results:** The study cohort included 18 patients receiving pacemakers (n = 9) or ICDs (n = 9) with mean age 71 years, 83% (n = 15) male, 44% (n = 8) with AF, and average LV wall thickness of 1.3 cm. Each biopsy took under 2 minutes to acquire. Of the entire cohort, 17% (n = 3) of the patients had adipose samples that were Congo red positive, consistent with amyloidosis. The average LV wall thickness of the 3 patients with biopsy-proven amyloidosis was 1.5 cm. All 3 patients were ultimately diagnosed with transthyretin (ATTR) amyloidosis (2 wild-type, 1 hereditary) and treated with the novel transthyretin-binding medication, tafamadis.

**Conclusion:** Adipose tissue excisional biopsy of the newly created chest wall pocket can be easily, safely, and quickly performed (within 2 minutes) at the time of CIED implantation. Timely histopathological confirmation of amyloidosis in these at-risk patients permitted early initiation of disease-modifying agents. These data warrant a large prospective trial in patients with risk factors for amyloidosis undergoing CIED implantation.

**Figure 1**

**POSTER PO-620:**

**Featured Posters: CIED at Pod 7**

Friday, April 29, 2022
12:30 PM - 2:30 PM

**PO-620-01**

**PERFORMANCE OF CARDIAC IMPLANTABLE ELECTRONIC DEVICES IN DETECTING PREMATURE VENTRICULAR CONTRACTION BURDEN**

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**Background:** Frequent premature ventricular contractions (PVCs) can cause or exacerbate cardiomyopathy. At-risk