A 74-year-old woman presented to her primary care physician complaining of increasing lethargy and dyspnoea over a period of 3 months. Examination revealed marked macroglossia with submandibular swelling (Figure 1A and B), a regular bradycardia of 40 beats per minute, a raised jugular venous pressure to the angle of the jaw and bilateral pitting oedema. An EKG demonstrated complete heart block with a regular junctional escape rhythm with associated ventricular bigeminy and underlying atrial fibrillation (Figure 2). Transthoracic echocardiography revealed preserved systolic function although there was significant bilateral atrial enlargement suggestive of diastolic dysfunction. A lingual biopsy demonstrated abundant amyloid deposits that exhibited green birefringence under polarized light in Congo-Red stained sections (Figure 3). A diagnosis of primary AL amyloidosis associated with a kappa light chain secreting multiple myeloma was subsequently confirmed by immunocytological

Figure 1. (A and B) Significant macroglossia is evident with marked protrusion in the neutral position largely due to sublingual infiltration. The permanent pacemaker is seen here in the left subclavian region.
examination of the bone marrow. A VVIR permanent pacemaker was placed and treatment for her myeloma instituted. Her signs and symptoms of heart failure improved with treatment of her brady- cardia. Whilst, confirmatory myocardial biopsy was not warranted in this case, a diagnosis of cardiac amyloidosis would explain the apparent diastolic dysfunction, heart failure and conduction defects. Amyloid deposition secondary to haematological dyscrasia is well recognized, particularly in the heart and tongue.

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