Diagnostic utility of Acoustic Radiation Force Impulse (ARFI) imaging in primary Sjögren’s syndrome.

The purpose of the study was to assess the diagnostic utility of acoustic radiation force impulse (ARFI) imaging in primary Sjögren's syndrome (pSS). One hundred fifty-seven patients with sicca symptoms and/or salivary gland swelling were included. Sicca symptoms, Schirmer test, unstimulated whole saliva (UWS), SS-A/B antibodies, and histology were assessed according to American-European Consensus group (AECG) criteria. All patients underwent high-resolution ultrasound and ARFI imaging of the parotid (PG) and submandibular glands (SMG). Seventy patients were classified as having pSS. The remaining 87 patients suffered from idiopathic sicca (n = 24), rheumatoid arthritis (n = 12), sarcoidosis (n = 9), cutaneous/systemic lupus erythematosus (n = 7), scleroderma (n = 2), dermatomyositis (n = 1), HBV/HCV (n = 2), and panarteritis nodosa (n = 1), and disorders in 29 patients were classified as not otherwise specified. ARFI values of the PG were significantly higher in the pSS versus non-pSS groups (2.86 ± 0.07 m/s vs. 2.15 ± 0.11 m/s, p < 0.0001). ARFI imaging demonstrated diagnostic sensitivity and specificity of 81 % and 67 %, respectively. In addition to histology, ARFI imaging was the most important diagnostic tool for identifying early pSS. Early stages in Sjögren's syndrome become
apparent with major salivary gland enlargements. Schirmer and unstimulated whole saliva tests demonstrated insufficient sensitivity/specificity for early-stage diagnosis. Acoustic radiation force impulse imaging is a reliable tool for diagnosing early disease stages.