A useful ultrasound artifact and its application – the ‘twinkling sign’

There is a relationship between this artifact and the morphology (surface) and the chemical composition of the calculus. Identification of the composition of the calculus can help for the management options used.2

An artifact on other imaging modalities, which results from an error in the imaging technique, may lead to misinterpretation of the image. The ‘twinkling sign’ may lead to misinterpretation by suggesting vascular flow. This particular artifact has a benefit in differentiating a very small calculus from other echogenic structures in the urinary tract particularly after lithotripsy.1,2 Another application of the twinkling sign is for guiding transthoracic needle aspiration of lung and mediastinal masses. The needle is identified by using the twinkling sign (by moving the inner stylet gently). The needle tip is well located and the blood vessels are avoided.3