PENILE ULTRASONIC VELOCITOMETRY IN THE EVALUATION OF PENILE ARTERIAL HEMODYNAMICS. AN EASIER ALTERNATIVE TO DOPPLER ULTRASONOGRAPHY

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INTRODUCTION & OBJECTIVES: Penile Doppler Ultrasonography (PDU) has a very important role in the diagnosis of erectile dysfunction but it has limitations such as. high cost and operator dependency. We report a prospective study comparing PDU and Penile Ultrasonic Velocitometry (PUV) in assesing penile arterial hemodynamics.

MATERIAL & METHODS: PDU and PVU were performed after intracavernosal injection of papaverine on twenty consecutive patients with erectile dysfunction. These patients ranged in age from 34 to 62 years with an average of 52 years. All patients were evaluated with a detailed medical history and routine labarotory analysis. PDU was performed using a 7,5 MHz linear transducer. PUV was performed using the Knoll/MIDUS™ system, a fixed-angle device with 8 MHz transducer. Measurements of peak systolic velocity (PSV) and end diastolic velocity (EDV) at 5,10,15 and 20 minutes were recorded in each patient during both techniques. PDU was performed by the same radiologist and PUV was performed by the same urologist for each patient. Each patient was his own control. The statistical significance between the two techniques was assesed by examining the correlation.

RESULTS: The results obtained revealed that PUV was as accurate as PDU in measuring PSV and EDV of the cavernous artery.

CONCLUSIONS: This fixed angle device can identify the cavernous artery without real time imaging and provides an easier assessment of penile hemodynamics. It is less operator dependent, relatively cheaper and can be used as a screening device for erectile dysfunction by an urologist.