Objective To review the clinical significances of the penile brachial index (PBI) in the diagnosis of vascular erectile dysfunction.

Methods Fifty four patients complaining for erectile dysfunction at least 3 months, 25–55 years old, were included in the study. All patients underwent detailed history. After the patient rested for 20 min, systolic pressure of the dorsal artery of penis was measured by DT-2010 Doppler ultrasonic blood stream detector. Systolic pressures of the bilateral brachial arteries were measured by mercurial sphygmomanometer, then PBI was calculated (PBI=systolic pressure of the dorsal artery of penis/Systolic pressures of the bilateral brachial arteries). All patients were examined by colour duplex sonography at the same time.

Results The levels of PBI of these ED patients were 0.78±0.32, from 0.58–0.92. The levels of PBI of 46 patients were higher than 0.75 and these patients had no abnormality in the examination by colour duplex sonography. 6 patients of the levels of PBI between 0.60 and 0.75 were diagnosed as mix-type ED. Two cases with the PBI of were less than 0.60 and majored for arterial ED. One patient got intermittent claudication and lower
extremity arterial occlusions were found by Doppler ultrasonic blood stream detector. The other patient was found by heart colour Doppler ultrasound by supplemental examinations and received the treatment of percutaneous coronary intervention. **Conclusion** PBI has screening significance for the diagnosis of the vascular erectile dysfunction. It’s a powerful method that the nurse helps the doctor to better understand the patient’s condition.