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## EDITORIAL COMMENT

“Small is beautiful.” The smaller the PCNL tract size, the lesser the complications. The troika of Microperc (4.5Fr), ultra miniperc (13Fr) and miniperc (less than 20Fr) offer stone clearance with the smallest possible tract. The wave of miniaturization has ushered in smaller scopes, retrieval devices and energy sources. The miniaturization of PCNL instruments has led to a paradigm change in indications for PCNL. Apart from dealing with large staghorn calculi and complex stones PCNL now competes with flexible ureteroscopy and shock wave lithotripsy to treat stones less than 1.5 cm. This has happened due to the improved safety profile of the procedure.

A few points merit mention. 1) During the last decades urologists have seen a paradigm shift in the size and location of the stones that we treat. In the past the majority of stones were complex. Although they are still seen, they are seen less frequently, which has necessitated a change in the preferred choice of treatment. 2) Miniaturization has ushered in a new set of problems, including the need for new, innovative techniques to retrieve fragments, such as the Venturi effect mentioned by the current authors

to ensure complete clearance. In a miniaturized milieu a suboptimal puncture leads to oozing and poor vision. Readers must understand that a new technique cannot be performed by compromising the basic principle of PCNL, that is a perfect puncture is the key to success. 3) A recent study showed that microperc is as safe and efficacious as flexible ureteroscopy.<sup>1</sup> Further, it demonstrated that microperc is associated with higher Hb loss, increased pain and higher analgesic requirements while RIRS is associated with a higher requirement for Double-J stenting. Similarly all new modalities such as UMP should be compared with the accepted reference standards PCNL, shock wave lithotripsy and flexible ureteroscopy.

Last but not least we agree with the authors that all minimally invasive techniques would be complementary to the existing armamentarium rather than considered stand-alone procedures.

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