SUMMARY

Percutaneous nephrolithotomy is now widely accepted as the preferred method of managing symptomatic upper urinary tract calculi. Percutaneous extraction and disintegration of upper urinary tract calculi are replacing open surgical lithotomy for the great majority of patients who require treatment. These procedures are generally performed as a collaborative effort between radiologists and urologists, with the former responsible for the initial percutaneous nephrostomy and track dilatation and the pre-and postprocedural radiologic evaluation of the patient, and the latter responsible for nephroscopic stone extraction or disintegration.

Placement and dilation of the tract require fluoroscopic control, either by multidirectional C-arm fluoroscopy in the operating suite or by fluoroscopic equipment in the radiology department.
Fluoroscopic quidance is essential to successful percutaneous stone removal but generates measurable radiation exposure to the patient and physician. Exposure is determined by the type of radiology equipment and its radiation output, as well as shielding techniques and duration of the procedure. To determine the extent of exposure to the patient and personnal radiation exposure monitoring was performed during the procedure.

As compared with open surgery this procedure results in fewer complications and a more rapid recovery.

This study was conducted on thirty patients submitted for percutaneous nephrostomy. In all of the successful cases percutaneous nephrolithotomy were done by the two stage procedure except one was done by the one stage procedure. Percutaneous nephrostomy placement was unsuccessful in two cases in which an improper tract was done in one case and the catheter was dislodged in the other.
No significant complications occurred among our series.

In conclusion, we consider percutaneous nephrolithotomy to be a safe and reliable procedure for the treatment of renal calculi. When starting to perform percutaneous interventions, the technique has to be carefully studied and the procedures meticulously planned in every detail. It is then possible to gain skill and experience, enhancing results and reducing the complication rate.