PERCUTANEOUS NEPHROLITHOTOMY AT VANCOUVER HOSPITAL - REVISITING THE USE OF METAL TELESCOPIC DILATORS FOR TRACT DILATION

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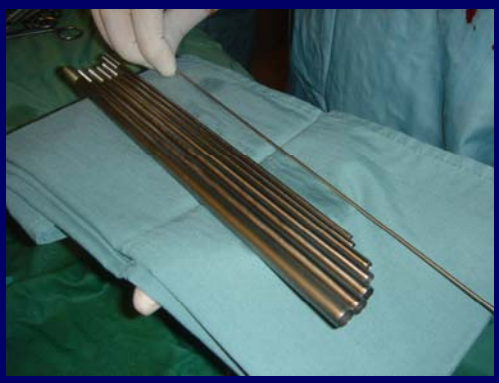
Introduction
Telescopic Metal Dilators:

- Seldom used in North America
- Perceived increased bleeding risk
- Used at Vancouver Hospital since January 2004
- Cost savings



Objectives & Methods

- To evaluate telescopic metal dilation with regard to bleeding complications
- Prospective study of a single-surgeons experience on 33 patients having unilateral PNL (31 single tract, 2-two tracts)
- Tract dilation < 10 minutes

Patient Characteristics

Age	Mean: 51 yrs (14 – 74 yrs)
Sex	Male 51.5 % Female 48.5 %
BMI	Mean: 30 kg/m^2 (17 – 49 kg/m^2)
ASA	Mean: 2.7

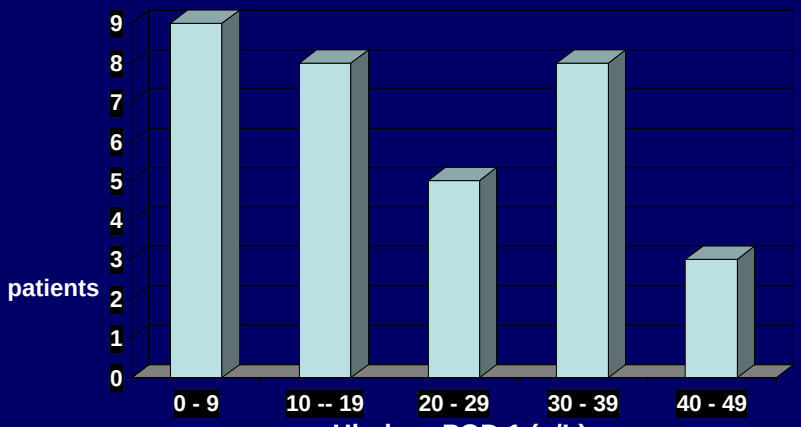
Stone Characteristics

Stone Surface Area	Mean: 945 mm^2 (49 – 6400 mm^2)
Side	Left 67% Right 33%
Tract Location	Upper Pole 22 % Inter-Polar 11 % Lower Pole 67 %
Indication for PNL	**Stone burden** 79% Failed ESWL 18% Occupational 3%
Composition	Ca-Oxalate 70 % Struvite 21 % Uric Acid 6 % Cysteine 3 %

Results

Length of Stay	Median: 2 days (1-13 days)
Stone Free Rate	73 % (24/33 patients)
Success Rate (non-infected fragments <4mm)	88 % (29/33 patients)
Secondary Nephroscopy Rate	12 % (4/33 patients)

Bleeding Complications



{median 21 g/L, range 3 – 46 g/L}

Tranfusion Rate = 3 % (1/33 patients)

Complications

- Arteriocalyceal fistula (1)
  - Embolization on POD 3
- Urine leak requiring stent (1)
- Medical complications (4)
  - Pyelonephritis (1)
  - MI (1)
  - CHF (2)

Conclusions

- Reusable metal telescopic dilators:
  - effective and safe method of tract dilation
    - Bleeding complications 3%
    - Success rate 88%
  - substantial cost savings ($300/case)
  - has allowed expansion of the PNL program at our center