EXPEL™ Drainage Catheter with Twist-Loc™ Hub

EXCEPTIONAL DELIVERABILITY, FLEXIBILITY AND SECURITY

Staghorn Kidney Stone Case

Courtesy of Dana Tomalty, MD
Huntsville Hospital
• A staghorn kidney stone is a term used to describe a large stone that takes up more than one branch of the collecting system in the renal pelvis of the kidney.
• This is a case courtesy of Dr. Dana Tomalty
  – Large staghorn calculus casting renal collecting system
  – Upper pole calyx completely stone filled
  – Initial access in lower pole but surgeon wanted upper pole access as well
Staghorn – the most difficult of kidney stones (Part 2)

- Utilizing Seldinger technique a wire is placed into the upper calyx
- The fit of the wire is extraordinarily tight as the radio opaque area represents almost complete stone in that location
- Pushing a catheter into that zone would meet very high friction and resistance
- A catheter without robust columnar strength would fail. That is measured with buckling resistance
Staghorn – the most difficult of kidney stones (Part 3)

• Dr. Tomalty chose Expel based on design changes made to improve the deliverability profile.
• Let’s compare Expel versus Cook
  – 18.7% lower profile

**Expel Catheter 1.3 mm**  **Ultrathane™ Catheter 1.6 mm**

  – 81% lower frictional forces from hydrophilic coating and tapered tip measured on bench testing
• He stated the taper of Expel using a flexible metal cannula permitted placement of nephrostomy tube in this difficult stone casted renal pelvis