



TORQUE MEASUREMENT DURING BODY CAVITY ENTRY USING A THREADED VISUAL CANNULA

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Abstract- Port creation is one of the most common complications associated in endoscopic procedures. The focus of our study was to establish a reproducible method of determining the torque profile generated during body cavity entry using a Threaded Visual Cannula (TVC). A TVC was evaluated on 32 samples of foam media. A torque profile was generated by measuring the torque required to cannulate the foam media. Penetration of the media was captured by a digital imaging system. The magnitude of torque to required cannulate the foam media was dictated by the amount of friction present between the foam and the external threads of the TVC. Furthermore, the magnitude of friction was dictated by the material properties of the individual media. A reproducible method of measuring entry torque during body cavity entry was established.

Index terms: Torque measurement, laparoscopic surgery, port creation