Considerations For Single Port Surgery Products

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“What should surgeons consider when choosing products for single port surgery?”

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As we consider the evolution of surgery from open to laparoscopy to minimally-invasive surgery, single-site surgery is the latest advancement in the reduction of trauma and scarring of the abdomen. Since a surgeon is now operating through a small cylinder of access with a single incision in the umbilicus, several points need to be considered. First and foremost is the ability to obtain a good visualization of the operative field. The use of flexible tip scopes facilitates uncompromised visualization, provides surgeons with a larger operative view, and delivers greater maneuverability and access.

Second, a multi-channel access port that allows for various instrument diameters and easy exchange of instruments is critical. The port must be designed in a way to accommodate various sizes of abdominal wall thicknesses. Additionally, the device should have flexible instrument ports to allow surgeons the ability to introduce at least one pre-bent hand instrument, form a low profile both inside and outside the abdomen to enable the movement of instruments with greater degrees of freedom and a removable top to conveniently extract any tissue or specimen without removing the port.

Third, hand instruments with intuitive functionality and ergonomic designs make it easier for surgeons to perform procedures. Instruments should be designed to be an extension of the surgeon’s hand and provide maximum comfort while reducing fatigue. It is also useful to consider how and in which procedures the hand instruments will be used. Devices are available in standard and bariatric lengths for both bipolar and monopolar applications and, as discussed above, some instruments are pre-bent. A pre-bent hand instrument can greatly enhance single-site surgery by allowing the surgeon to retract tissue in a manner similar to traditional laparoscopy.

Finally, surgeons should consider the ability for instruments to be reused and autoclaved as this can offer significant cost-effectiveness for their hospital or healthcare system.

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