

Needle Kit used in Laparoscopic Percutaneous Extraperitoneal Closure

EndoneedleNeo



Contents:

Puncture needle

16G x 70mm

Suture sender

18G x 83.5mm

Suture retriever

22G x 93.5mm

EOG Sterilization

One-time use



Contents

■ Puncture needle



【Features】

Sharp cutting-edge reduces the thrust resistance with little tissue damage, as well as the risk of miss-puncture to surrounding organs. Needle holder designed as the grip fits to handle the needle and improves operability of the stitch.

■ Suture sender and plug



A suture accommodated in the needle is fastened with the plug.

【Features】

The plug is easily detached by one hand when loosening the suture.

■ Suture retriever



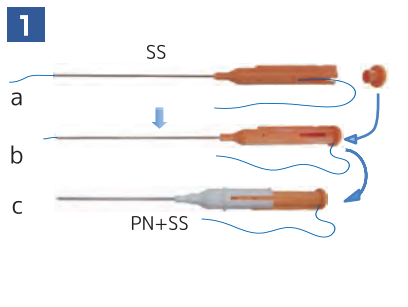
Setting the suture retriever to the suture sender so as to be the wirer-loop out of the tip of the suture sender, and passing the suture end through the loop, the suture is caught between the loop and the needle tip by pulling back the suture retriever.

■ Assembly

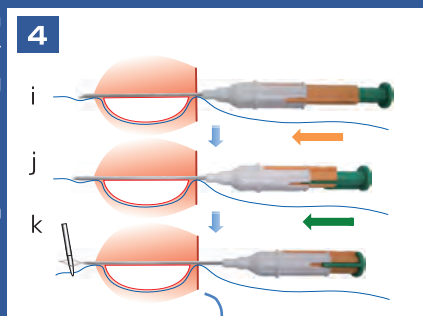


Above three needle can be put together into an assembly thus acting as a 3-stage rocket by pushing each part forward sequentially, which enables carrying the suture in the barrel of the puncture needle.

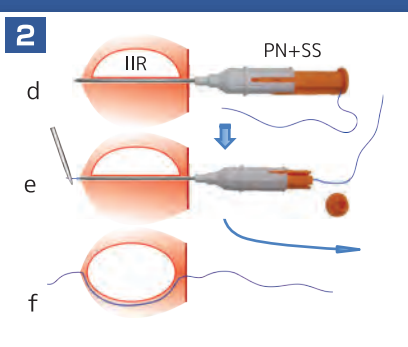
■ Use of Needle Kit in Laparoscopic Percutaneous Extraperitoneal Closure



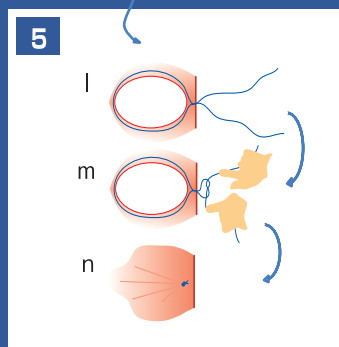
1) A 2-0 suture is placed through the barrel of the suture sender (SS) (a), which is fixed with a plug at the remaining-end of the suture 1 cm out from the tip of the SS (b), and is inserted into the the puncture needle (PN) with a plate in the short slit of the PN to fix it in place (PN+SS) (c).



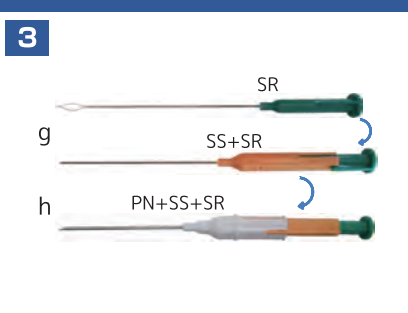
4) Move the PN+SS+SR along the upper half of the IIR and penetrate the peritoneum (i). Bring the SS and the SR forward (j). The suture end is caught by the loop of the SR, by moving the SR backward (k).



2) Insert the PN+SS along the lower half of the internal inguinal ring (IIR) and push out the tip into the abdominal cavity (d). Insert the SS' s plate to long slit so that the end of the suture appears from the tip of the PN. Grab hold the end of the suture with a grasper and pull out the SS (e), resulting in the placement of the suture in the extraperitoneal space along the lower half of the IIR (f).



5) After removal of the assembly, the suture has encircled the IIR, remaining both ends of the suture outside the body, which are tied resulting in the complete closure of the IIR (l-n).



3) Insert the suture retriever (SR)'s plate into the short slit of the SS and fix it in place (SS+SR) (g). Insert the SS+ SR into the PN, inserting the plate in the short slit of the PN to fix it in place (PN+SS+SR)(h).