APPLICATION AREA

colorectal surgery

pelvic Neuromonitoring
Twelve years of research: improved patient safety thanks to neuromonitoring of autonomic nerves

Intense clinical research has resulted in pelvic intraoperative neuromonitoring, enabling neuromonitoring of the autonomic nerves in the minor pelvis. The complex nerve structures can be localized and their function can be monitored. Many interventions in the minor pelvis, which have a risk for the autonomic nerve system, are possible for this application.

Better quality of life for patients following interventions in the minor pelvis

Statistical studies of postoperative anorectal and urogenital dysfunctions reveal that the majority of patients suffer incontinence and sexual dysfunction after surgical intervention in the minor pelvis.

COLORECTAL CANCER is one of the most common cancers worldwide. From now on for many critically ill patients, PIOM technology may provide a significant safeguard to quality of life in the face of invasive surgical intervention.

Even disciplines like PROCTOLOGY, GYNAECOLOGY, UROLOGY or NEUROSURGERY can benefit from pelvic neuromonitoring.
The pelvic neuromonitoring is an useful addition to the method of total mesorectal excision (TME). The pIOM allows a more gentle surgery especially for the nerves, than the standardly used maximal resection.

Functionality of the continence organs are intraoperatively monitored by the pIOM technology for pelvic Neuromonitoring. Thereby, inomed minimizes the risk of nerve injuries and the sequela involved.

The procedure is simple for the surgeon and does not cause considerable surgical delay.

Stimulation site in the minor pelvis is the inferior hypogastric plexus and the pelvic splanchnici nerves. Urogenital functions and the anorectal function are monitored by bladder pressure measurement and monitoring of the internal anal sphincter.

Monitoring of anal sphincter activity and monitoring of activity of the bladder muscles enables intraoperative identification of autonomic nerves in the minor pelvis.

The pelvic nerves are stimulated using a bipolar hand-guided stimulation probe which has been developed specifically for this purpose. It provides sufficient selectivity and the localization of individual nerve branches as well as their functional control.

At the beginning of surgery, electrodes must be placed at the internal anal spincter and external anal sphincter muscles to monitor anorectal functions.

Positive signals at bladder and rectum generally indicate preservation of sexual function.
Changes in EMG and pressure signals are detected and visually as well as acoustically represented via an automatic alert function. Therefore it is possible to clearly identify autonomic nerve structures and to monitor their function.
Publications about the topic and further information are available at:

www.inomed.com/pelvicMonitoring
Accessory information

Art.-No. 520 300
piOM Box
bladder pressure measuring

for connection to IONM devices,
for use with disposable pressure
converter with 1.5mm touchproof
female connector
• USB powered
• delivered non-sterile
• non-autoclavable

Art.-No. 520 335
piOM Set
with SDN electrodes

complete set consisting of
Catheter Connection Set
for bladder pressure measuring
• SDN electrodes
• fork probe 400mm
• single-use
• ETO-sterilized

Art.-No. 520 336
piOM Set
with rectal electrode

complete set consisting of
Catheter Connection Set
for bladder pressure measuring
• rectal electrode
• fork probe 400mm
• single-use
• ETO-sterilized

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