

Hernia

 Springer

The World Journal of Hernia
and Abdominal Wall Surgery

Abstract Book

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March 28-31, 2012

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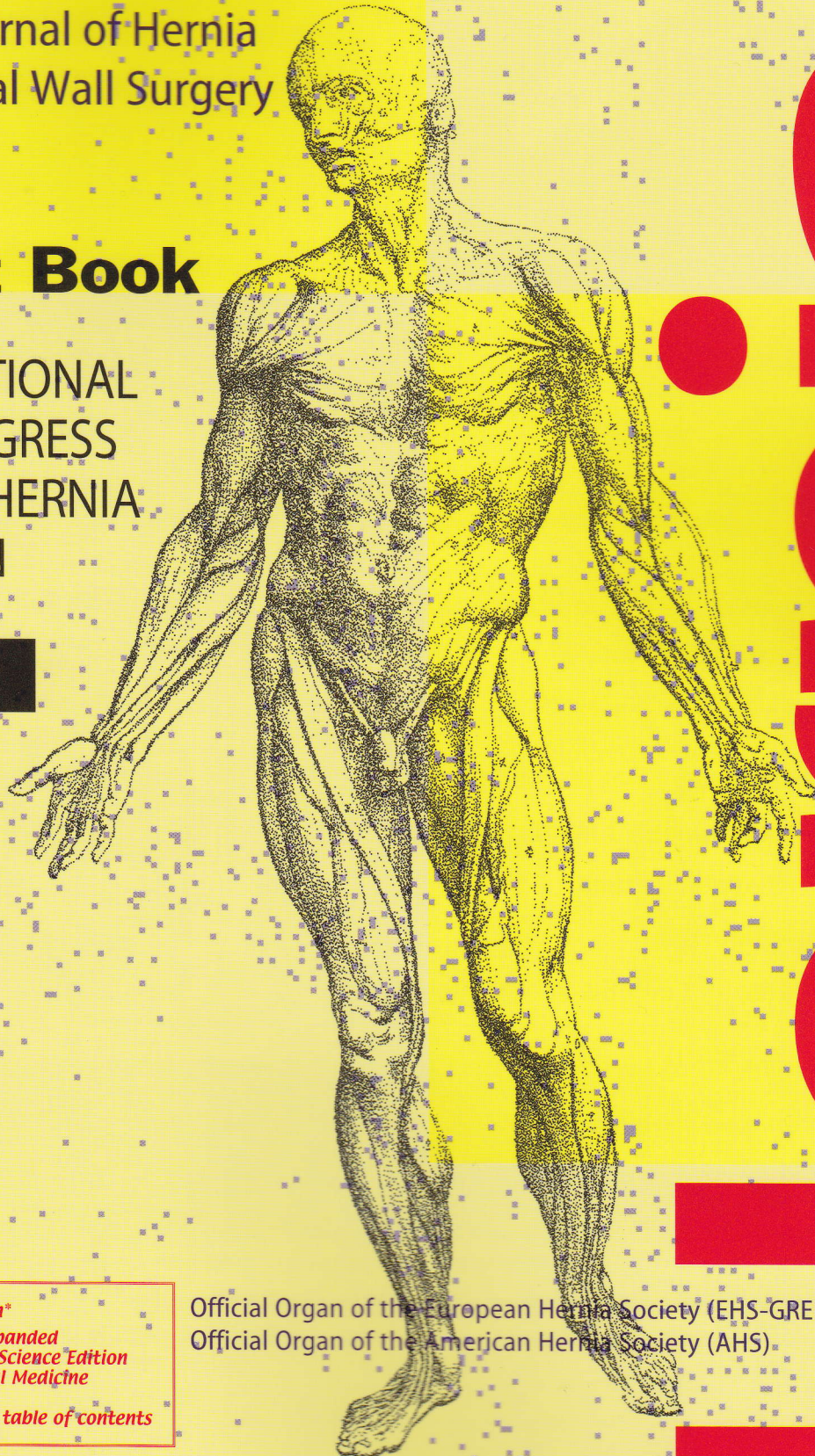
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IP-1967**New area in laparoscopic hernia repair: Devices for mesh introducing, placing, & deploying**

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Background: The modern Meshes for intraperitoneal Ventral hernia repair create barrier for bowel adhesion beside of capability of incorporation into the abdominal wall. Groin meshes become less irritating by reducing mesh weight and having bigger porosity. In spite of meshes progression and guidelines for the recommended surgical techniques the adaptation of Lap Hernias repair by the surgeon was not dramatically increased. One of the major reasons is the difficulty and challenge that an average surgeon confronts with handling and placing the mesh. Placing the mesh precisely centered to the center of the Hernia defect with appropriate overlap margin all over the defect is the crucial part of the repair and will indicate if the Hernia will recur. Another difficulty is the long operating time consuming by the Lap mesh handling. For approaching the challenges of mesh handling by the average surgeon, enabling more surgeons adapting the Lap Hernia repair and reducing the cost of the Lap procedure, devices for mesh introducing pacing and deploying started to be developed.

Methods: To date there are three functioning devices of mesh handling for Lap Ventral hernia repair: Echo, PolyTouch and MNS – Mesh Navigating System, but only the MNS is capable for Groin repair as well.

What are the optimal requirements from a mesh handling device for any Lap Hernia repair?

1. No handlings of the mesh for reducing mesh contamination, damage and time saving – the mesh preloaded and packed with the device, ready to use.
2. Single use low cost device that will not affect the cost of the mesh.
3. Fully one hand operated device – the other hand holds the tacker, no need for assistance.
4. Smooth, safe and rapid introducing and leading the mesh to the Hernia defect area.
5. Centering and orientating the center of the mesh to the center of the defect and securing adequate overlap mesh margin all over the defect – reducing recurrences.
6. Fully deploying the mesh under control for securing the centering and the overlap margins of the mesh.
7. Holding the entire mesh fully strained for fixation even pneumo is reduced - avoiding folds and wrinkles that will reduce incorporation into the abdominal wall.
8. Smooth, safe and rapid detachment from the mesh and withdraw from the abdominal cavity.

Results & conclusions: Comparing the functioning between the 3 devices leads to the conclusion that the MNS is the one device that fully addresses the mentioned optimal requirements. The MNS device enable the average surgeon performing easily and precisely Lap Hernia repair, potentially reducing recurrences and the cost of the procedure by dramatically cutting on the operating time.

IP-1968**Fixation free incisional hernia repair with a newly designed mesh with integrated bands**

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Introduction: Implant fixation and how to ensure adequate mesh overlap are key issues in abdominal hernia repair. A newly developed technique for ventral and incisional hernia repair using a proprietary implant with incorporated straps makes fixation unnecessary through tissue friction. This new implant allows for a broader coverage of the abdominal wall and results in simplified repair. Midterm follow-up in a cohort of patients indicates a decrease in postoperative complications and no recurrences to date.

Material and methods: A lightweight, large porous polypropylene mesh with a central body and eight radiating arms was used to repair ventral or incisional hernia. The implant was placed in open preperitoneal or retromuscular sublay in 30 patients. The straps were delivered by means of a proprietary needle, tunneled laterally through the abdominal wall muscles.

Results: There were no significant intraoperative complications to report. An overlap of the defect of at least 30% was achieved in all patients. In a follow up from 30 to 36 months, 3 seromas and 1 infection occurred, successfully managed without mesh removal. Postoperative ultrasound detection showed that all straps were well integrated within the abdominal wall. No mesh dislocation, hematoma, chronic pain or recurrences have been reported to date.

Conclusions: The described prosthetic straps system allowed for much smaller incisions and eliminated challenging maneuvers associated to mesh fixation. The straps showed to ensure a firm, correctly orientated mesh positioning. A very wide lateral mesh placement with broad defect overlap was accomplished. Friction and straps elongation helped to absorb forces impacting the implant during early recovery, avoiding mesh dislodgement. In our belief these advantages are clearly demonstrated and result in: fixation-free mesh placement, simplified procedure, broader coverage of the abdominal wall, shortening of the operative time. Additional advantages are decreased postoperative complications and absence of recurrences.