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laparoscopic eradication of deep infiltrating endometriosis with rectal
and parametrial resection according to the “Negrar Method”

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Nerve-sparing surgery for deep infiltrating endometriosis: laparoscopic eradication of deep infiltrating endometriosis with rectal and parametrial resection according to the “Negrar Method”

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CONFLICT OF INTEREST STATEMENT

No conflict of interest nor and personal relationships with other people or organizations that could inappropriately influence the work is present

Objective: To show technical highlights of a nerve-sparing laparoscopic eradication of deep infiltrating endometriosis with rectal and parametrial resection according to the “Negrar Method”

Design: Stepwise demonstration of the technique with narrated video footage. No IRB approval was required for this paper.

Setting: Bowel endometriosis accounts for about 12% of total cases of endometriosis. Most frequently rectal infiltration also means parametrial infiltration from a widespread infiltrating disease. Its removal with inadequate anatomical surgical knowledge may lead to severe life-lasting harms to visceral pelvic innervation causing bladder, rectal and sexual function impairments. Nerve sparing techniques, heritage of onco-gynecologic surgery, has been described to have lower post-operative bladder, rectal and sexual dysfunctions than classical approaches.

Interventions: Laparoscopic excision of deep infiltrating endometriosis was performed following the nerve-sparing “Negrar Method” Technique in 6 steps:

Step 0- Adesiolysis, ovarian surgery and removal of the involved peritoneal tissues.

Step 1- Opening of pre-sacral space, development of avascular spaces and identification and preservation of pelvic sympathetic fibers of the inferior mesenteric plexus, superior hypogastric plexus, upper hypogastric nerves and lumbo-sacral sympathetic trunk and ganglia.

Step 2- Dissection of parametrial planes, isolation of ureteral course, lateral parametrectomy and preservation of sympathetic fibers of postero-lateral parametrium and lower mesorectum (the lower hypogastric nerves and proximal part of the inferior hypogastric plexus or pelvic plexus).

Step 3- Posterior parametrectomy, Deep Uterine Vein identification and preservation of the parasympathetic pelvic splanchnic nerves and the cranial and middle part of the mixed inferior hypogastric plexus in caudad posterior parametrium and lower mesorectal planes.

Step 4- Preserving the caudad part of the inferior hypogastric plexus in postero-lateral parametrial ligaments

Step 5- Preserving the caudad part of the inferior hypogastric plexus in paravaginal planes

Step 6- Rectal resection and colo-rectal anastomosis

Conclusion: As showed in this case, the laparoscopic nerve-sparing complete excision of endometriosis it's a feasible and reproducible technique in expert hands and, as reported in literature, offers good results in terms of bladder morbidity reduction with apparently higher satisfaction than classical technique.

Video Legend: A frozen pelvis case is presented where deep infiltrating endometriosis merges together uterus, adnexa and bowel. Step-by-step procedure for unfreezing the frozen pelvis following surgical anatomy rules is shown. Eradication of deep infiltrating endometriosis with segmental bowel resection is achieved illustrating how to spare the visceral pelvic innervation (**SHP** superior hypogastric plexus, **LHN** left hypogastric nerve, **RHN** right hypogastric nerve, **PP** pelvic plexus).