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P254. Features of innervation of ectopic endometrium in women with chronic pelvic pain

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Context: According to modern research, an increased expression of new nerve fibres is found in genital endometriosis (GE) called neoneurogenesis. PGP 9.5 is a specific marker for myelinated and unmyelinated nerves, alpha, beta, gamma, delta, B and C-fibers.
Objective: Determine the relationship between the intensity of pain syndrome and neoneurogenesis in deep infiltrating endometriosis (DIE).
Methods: In assessing the structure of pain was taken into account the nature of the pain, which was determined in accordance with Visual Analogue Scale (VAS), to organize the symptoms of neuropathic pain and analyze their intensity rating scale was used Pain Detect.
Patient(s): The study were examined 30 patients with DIE. The criteria for inclusion: age from 18 to 40 years; GE confirmed with laparoscopy; the presence of pain lasting longer than 6 months; menstrual function. Exclusion criteria: uterine fibroids; varicose veins; inflammatory diseases of the pelvic organs; receiving hormonal therapy within the previous 6 months of the study.
Intervention(s): The preparation of a focus of endometriosis for immunohistochemical study was performed during operative laparoscopy. Evaluated the expression of PGP 9.5 in immunohistochemical examination. The optical density and the relative expression area of the PGP 9.5 were evaluated.
Main Outcome Measure(s): Expression of PGP 9.5 increases with worsening pain. This testifies to the fact that the basis for the formation of neuropathic pain is neoneurogenesis.
Result(s): The expression of PGP 9.5 was detected in 28 of 30 patients (93.3%) in the focus of endometriosis. Expression of PGP 9.5 in patients with chronic pelvic pain (CPP) of mild severity was weak and occurred only near the glands and blood vessels; in patients with CPP of moderate and severe severity - on the entire area of the infiltrate tissue. The average area of relative expression of PGP 9.5 was higher in patients with CPP of severe severity (VAS), than with mild and moderate severity. A significant direct relationship established between the average expression area of PGP 9.5 and the pain intensity according to the VAS ($R = 0.7$, $p < 0.05$) and the Pain Detect ($R = 0.59$, $p < 0.05$).
Conclusions: The basis for the formation of the neuropathic component of CPP in patients with GE is neoangiogenesis, which ensures the infiltrative growth of heterotopic tissue, damage to nerve trunks, and increased nociceptive impulses into the central parts of the nervous system.

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