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### The efficacy of laparoscopy in the diagnosis and management of chronic abdominal pain

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**Background:** Chronic abdominal pain is a difficult complaint. It leads to evident suffering and disability, both physically and psychologically. Many diagnostic and therapeutic procedures have been described in literature, but with little proof or evidence of success. Laparoscopy is one of the modalities that could be of benefit in such cases. We aim to evaluate the diagnostic and therapeutic value of laparoscopy in cases with chronic abdominal pain.

**Materials and Methods:** Thirty patients with chronic abdominal pain were included in this prospective descriptive cross-sectional study. The pain in all patients was of unclear etiology despite all the investigative procedures. All patients were subjected to laparoscopic evaluation for their conditions. The findings and outcomes of the laparoscopy were recorded and analyzed.

**Results:** The most common site of pain was the periumbilical region (30%). A definitive diagnosis was made in 25 patients (83.3%), while five patients (16.7%) had no obvious pathology. Adhesions were the most common laparoscopic findings (63.3%) followed by appendiceal pathology (10%), hernia (3.3%), gall bladder pathology (3.3%), and mesenteric lymphadenopathy (3.3%). Postoperatively, pain relief was achieved in 24 patients (80%) after two months.

**Conclusion:** Laparoscopy is an effective diagnostic and therapeutic modality in the management of patients.

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### Factors and therapeutics in the development and resolution of chronic post-operative pain

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Chronic post-operative pain is a serious surgical and medical complication that is poorly treated. Thoracotomy procedures result in a 50% incidence of chronic pain (CPTP), lasting at least 6 months and refractory to most analgesics. The authorresearch has employed rodent models for chronic post-operative pain to better understand the peripheral factors released at the surgical site and the central nervous system factors that contribute to chronic pain. Endothelin-1 (ET) is released from the skin after incision and pre-operative local injections of ET receptor antagonists reduce post-operative pain. Spinal administration of Resolvins, anti-inflammatory bioactive lipids, at or even several days after thoracotomy effectively prevents CPTP, but spinal administration of the same dose 1-2 weeks later, when long-lasting pain has fully developed, is virtually ineffective. The same pattern of prevention, but non-reversal was found with spinal delivery of inhibitors of the P-p38 MAP Kinase, important intracellular enzymes that are activated by surgical procedures. The opportunity to prevent pain from developing by delivery of peripheral or spinal agents given in the perioperative period, contrasted with the ineffectiveness of these drugs to reverse pain after it had developed suggest that the mechanisms underlying pain induction differ from those that maintain pain, and that the locations in the nervous system may have shifted. We hypothesized that changes in the brain might be important for consolidating the pain that was initially induced through dynamic responses of periphery and spinal cord. To test this we chemically ablated a select set of Substance P sensitive neurons in the brainstem, using a NK-1-targeted neurotoxin, SSP-Saporin (SSP-SAP), either before or 10 days after thoracotomy. The pre-operative SSP-SAP treatment prevented CPTP, and the post-operative treatment partially reversed it, indicating that agents that inhibit the firing of NK-1 expressing neurons in the brain may be effective in preventing and reversing the chronic post-operative pain.

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