Intraoperative Mesenteric Block in the Management of Postoperative Ileus

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Postoperative ileus (POI) is a very common problem. It imposes a significant burden, measured in additional days spent in the hospital, patient discomfort, need for TPN, etc. Estimated added annual cost may exceed 1 billion dollars. While some interventions are invented to limit the degree and the incidence of POI and has some success (e.g., fast track multimodal approach), it is mostly symptoms-oriented therapy. The pathogenesis of POI is still not very well understood. Many ideas were proposed, and theories of Corticotropine releasing factor, inhibitory neuronal reflexes and inflammatory one gain wide acceptance. Being valid, they can’t explain all the complexity of the pathogenesis. Recent advances in our knowledge of anatomy of Enteric Nervous System (ENS) and lymphatic system, and discovery of inflammatory reflex, further contribute to our understanding of this important condition.

The technique of Mesenteric block was first described more than a century ago. It was evaluated in multiple experiments on animals since then and was found to be safe. It has been in clinical practice for a while and was proven to be a useful adjunct in the management of postoperative ileus, though the quality of the studies is generally low and most of them were done decades ago.

We will evaluate how the mesenteric block influences the postoperative ileus. We will use ileus rat models. Information about condition of the animals, physiologic parameters and inflammatory markers will be collected and analyzed.

The goal of the study is to develop a valid ileus model in the rat and to prove that mesenteric block is a safe and useful procedure in the management of POI in rats.