Role of Cardiothoracic Surgeon in Pain Control after Surgery

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The pain that accompanies cardiothoracic surgery is notable for its intensity and period. Acutely, moderate to severe levels of pain might not decrease considerably over the course of hospitalization and the first operative month. Dr. Wu and colleagues in this issue reviewed that chronic pain will last for months to years, and even low levels of pain will decrease function after cardiothoracic surgeries (1). Other than pain syndromes related to limb amputation, pain after cardiothoracic surgery is the foremost recognized pain syndrome related to a specific surgical treatment. Although thoracoscope is used with increasing frequency, this approach hasn’t had any favorable impact on pain that several had anticipated. Knowing that the adverse effects of cardiothoracic surgery on respiratory function can be relieved by effective perioperative analgesia, it’s not shocking that cardiothoracic surgeons have joined anesthesiologists in becoming sturdy advocates of analgesic interventions famous to limit the pain related to cardiothoracic surgery.

Noxious input related to cardiothoracic surgery is sent to the central nervous system on the intercostal, phrenic nerves and vagus. Afferent phrenic activity is thought to be the cause of the shoulder pain that frequently accompanies cardiothoracic procedures as this is curtailed by phrenic however not suprascapular or epidural blockade. Intercostal nerve disfunction as a result of incision, retraction, trocar placement, or suture is common and certain plays a major role in the pain accompanying cardiothoracic surgery. In addition, the necessity for constant respiratory effort and increased pulmonary waste produces a relentless and intense barrage of harmful input to the central nervous system.

Initial reports indicated that half of patients describe pain one year after thoracotomy, with several continuing to report pain even years later. Luckily, the prevalence of postthoracotomy pain is also modifiable, with rates as low as twenty-one percent one year after surgery if perioperative pain is managed sharply. Amazingly, video-assisted cardiothoracic surgery (VATS) is related to a prevalence of chronic pain similar to that of open procedures, with rates of pain in the range of 22% to 63%, which is perhaps because of intercostal nerve and muscle damage from trocar insertion. In contrast, residual pain one year after surgery is noted to be twenty-five percent after median sternotomy, emphasizing the role that improved stability of the closure and reduced intercostal nerve disruption could play in minimizing chronic pain. Many demographic and clinical factors facilitate to spot patients predisposed to development of chronic postsurgical pain. These include depression, anxiety, youth, previous surgery, concurrent pain, lesions of the chest wall, female sex, analgesic use in the perioperative time and elevated levels of pain.

Lung volumes after cardiothoracic surgery might be reduced by up to half of the original volume, aggressive analgesic therapy, in this case, results in improvements in pulmonary function, which is not possible with standard medical care. Supraventricular tachydysrhythmias are usually observed once pectoral surgery is done and will be less likely coincidence with certain thoracic epidural analgesic regimens,
though this is more likely because of the modification of sympathetic outflow rather than the associated analgesia. If pain persists, physical activity is reduced, and even low levels of pain is associated with reduced physical and social activity as well as world perceptions of reduced health.

ARTICLE INFORMATION

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