

Case Report

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Appendectomy Realized Con Local Anesthesia: A Case Report

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Introduction

Historical background

The first known appendectomy was performed in 1736 by Claudius Amyand in London. He operated on an 11 – year-old boy with a scrotal hernia and a fecal fistula. Within the hernia sac, Amyand found a perforated appendix surrounded by omentum. The appendix and omentum were amputated.¹ It would be over a century later before appendicitis was widely recognized as a common cause of a right lower quadrant pain. In 1886, Reginald Fitz presented his findings regarding appendicitis and recommended consideration for operative treatment². In 1889, Charles McBurney published his landmark paper in the New York State Medical journal describing the indications for early laparotomy for the treatment of appendicitis³. He notified in 1884 the incision that bears his name³ eventually, early appendectomy became the accepted standard of care, with broad indications in order to prevent perforation. However, this had almost no impact on the incidence of perforated appendicitis or on the mortality of appendicitis.⁴

Despite the great progress over time to treat appendicitis, no one had attempted an appendectomy under local anesthesia, despite being less invasive, less morbidity and less costly than general anesthesia. We report the case of an appendectomy performed under local anesthesia in the “hospital pediatrico de sinaloa”

Clinical Case

8-year-old male patient originally from Cosala, Sinaloa, Mexico, healthy, that goes to the emergency department because of abdominal pain of two days of evolution of Sudden onset periumbilical and diffuse pain, progressive, accompanied by nausea and vomiting that eventually localizes to the right lower quadrant, was treat-

ed with analgesics by his mother dulling pain momentarily, mothers refers that pain increased as well as vomiting so she decided to take him to the emergency room. In the physical exploration: patient looked in accordance to his age, sweating, pulse rate increased, dehydrated oral mucosa, thorax normal, the abdomen was distended, decreased peristalsis, hard, barely depressible, tenderness near McBurney’s point, muscular guarding in the right iliac fossa, positive rebound tenderness, presenting results as alteration leukocytosis >21,000 cells/mm³ accompanied by a polymorphonuclear prominence. It was decided to have an emergency surgery for acute appendicitis prior informed consent, using sedation with fentanyl at dosis of 2mcg/Kg, dexmetomidina 1mcg/Kg, propofol 100mcg/Kg these are using to avoid the anxiety of the patient as well as for the management of visceral pain, it was decided to manage the somatic pain with local anesthesia with simple lidocaine 2% infiltrate deeply between the eleventh rib and anterior superior iliac spine, The blockade with is taken as an anatomical reference for the passage of the ilioinguinal and iliohypogastric nerves two centimeters inside and two centimeters below to the antero superior iliac spine. The block is applied with a single puncture in the referred site (**image 1**), For some authors this technique is insufficient, so it is complemented by local infiltration on the skin to be incised (**image 2, image 3**), subcutaneous cellular tissue blocking nerves T12, L1, and ilioinguinal, iliohypogastric (**image 4**), perform Rockey – Davis incision, is dissected by planes to reach cavity without presents data of pain, found it purulent fluid, 10 cm long vermiform appendix retrocecal, perforated in its middle third (**image 5**), the appendiceal stump was managed

by ligation and inversion, proceeded to aspirate abdomen, cul-de-sac, reviewed hemostasis and stitched by planes without drainage, passed to floor of pediatric surgery. It was decided to start a clear

liquids diet in the few postoperative hours without distension it was decided to progress the diet on the second day, decided to discharge because of clinical improvement.



Image 1: infiltrating anesthesia in extraperitoneal fascia



Image 2: infiltrating anesthesia in the incision line



Image 3: infiltrating anesthesia in the incision line

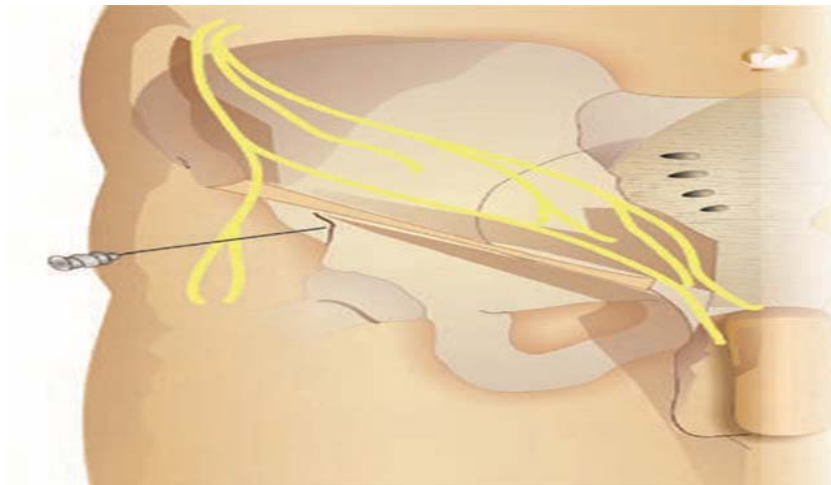


Image 4: abdominal wall nerves

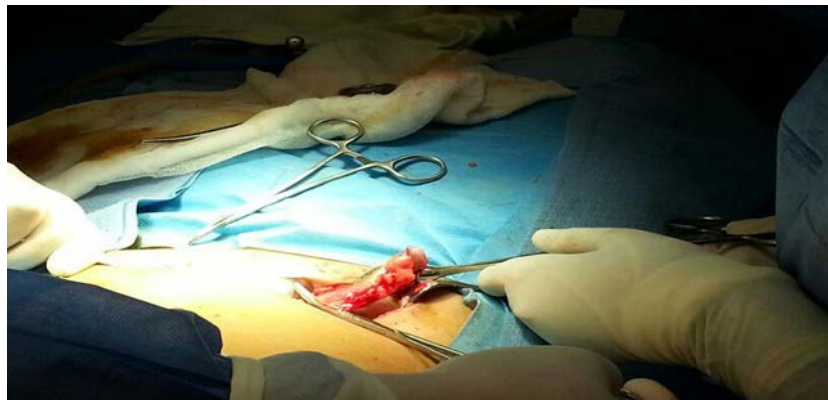


Image 5: appendix perforated

Discussion

The lifetime risk of developing appendicitis is 8.6% for males and 6.7% for females, with the highest incidence in the second and third decades.⁵ The establishment of a diagnosis of acute appendicitis has been a problem for many surgeons, even more so in young children than in adults. The inability for them to give an accurate history, diagnostic delays by both parents and physicians, and the frequency of gastrointestinal distress in children are all contributing factors to the misdiagnosis and delay in diagnosis.⁶

There is no doubt that the promptly surgical intervention is the elective treatment.³ The question is: Why should I perform the appendectomy with local anesthesia? The anesthesiologists had handled the peripheral nerves in the members but not in the abdomen because they have had the epidural or either subarachnoid anesthesia,⁷ However, sometimes we have older patients with high surgical risk to operate, so have been sought more secure anesthetic techniques.⁸ Over the years the techniques of abdominal peripheral block have been refined,⁹ For more than forty years, inguinal repair has been performed local anesthesia, offering less postoperative pain^{10,11,12} being an approach simpler and secure, the procedures performed have been used with good results, offering the advan-

tages in addition to producing less postoperative pain.¹³ In our hospital, Dr. Garrido has performed more than 100 appendectomy with local anesthesia with the same results as we described below, so we decided to report this case.

But not everything is perfect because it requires an understanding of the abdominal neuroanatomy, the time to perform the appendectomy is limited, and at the same time not be able to use for visceral analgesia but becomes available through the use of intravenous sedation and with the gentle handling of tissues.¹² However, these disadvantages create better results than the norm.

Conclusion

The appendectomy under local anesthesia and sedation it can be done, in case of failure of the epidural anesthesia and as an excellent method of postoperative analgesia or if you are in remotes places with special equipments. Can be considered an alternative in high risk patients. Each surgeon, according to his criteria, might use only in special cases to convert it into his technique of choice. Now the surgeons should pay attention on the details, such as the minimum risk, the optimum control of pain, early recovery of the patient. The appendectomy performed with local anesthesia and sedation for the control of visceral pain and anxiety it could be a method with all these expectations.

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