

An unexpected benefit of pre-emptive rectal analgesic administration: the “key” to postoperative analgesia

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Abstract

ANALGESIC AND ANTI-INFLAMMATORY DRUGS are frequently administered intraoperatively by the rectal route to provide pre-emptive postoperative analgesia. We report the case of an inmate of a federal penitentiary who underwent orthopedic surgery in a public hospital. After induction of general anesthesia, indomethacin and acetaminophen were administered rectally. This led to the incidental discovery of a handcuff key hidden in the rectum and, thereby, the prevention of a planned escape. A review of data regarding escapes by prisoners from public hospitals is provided, as well as a description of cases of patients presenting with foreign rectal objects. A number of benefits have been described for the use of pre-emptive analgesia. This is the first reported description of an incidental benefit: the prevention of a planned escape by a prison inmate.

Nonopioid drugs such as nonsteroidal anti-inflammatory drugs and acetaminophen have been shown to reduce postoperative requirements for opioids following a variety of surgical procedures.¹ There is evidence that the pre-emptive, presurgical administration of these medications may be beneficial in further reducing postsurgical analgesic requirements by providing therapeutic drug levels at the time of recovery from anesthesia.² Coanalgesic drugs are commonly, and conveniently, administered by the rectal route after induction of anesthesia. We present an unexpected benefit arising from the pre-emptive administration of analgesic suppositories in a prison inmate undergoing an orthopedic procedure.

Case

An inmate of a maximum-security Canadian federal penitentiary was assessed prior to a minor elective orthopedic procedure. He was seen in the outpatient procedures unit; his wrists and ankles were shackled, and he was accompanied by 2 correctional officers. Preoperative assessment revealed him to be healthy and fit, with no history of anesthetic problems. There was no significant medical history and, in particular, no gastrointestinal complaints. He was taking no medication and denied illicit drug use. He expressed a preference for general anesthesia.

Under routine monitoring, with the correctional officers



in the operating room, anesthesia was induced with fentanyl and propofol, and a laryngeal mask airway was inserted. At this point the patient's shackles were removed, the officers left the operating suite, and anesthesia was maintained with fentanyl, nitrous oxide and isoflurane. As part of our standard perioperative analgesic protocol, the circulating nurse administered rectal suppositories containing indomethacin, 100 mg, and acetaminophen, 1300 mg, following induction of anesthesia. During insertion of the first suppository, the nurse reported an unusual resistance and removed the suppository. This was followed by the expulsion of a metallic object from the rectum, which proved to be a key to the handcuffs used in the transport of inmates. After the key was cleaned, it was returned to the correctional officers, who confirmed that an es-

cape plan was the likely inspiration for the insertion of this object. The suppositories were then reinserted, this time without further surprises, and anesthesia and surgery proceeded uneventfully. Following the completion of surgery, the anesthetic was discontinued, the laryngeal mask removed, and the patient was transferred to the postanesthetic care unit. The recovery nurses reported that upon full recovery of consciousness, the patient's first request was for a bedpan and some privacy, the former being supplied and the latter denied. Most importantly from an anesthetic point of view, the patient experienced excellent postoperative pain control.

Comments

Preoperative administration of coanalgesic drugs has become common practice, with the rectal route of administration often being used after the induction of anesthesia. Although no reports were found of unusual objects being discovered incidentally during suppository insertion, a number of authors have described unusual presentations of foreign rectal objects (FROs). Most case reports occur in the surgical literature and deal with techniques for the removal of retained FROs. Preferred objects have included garden vegetables such as carrots,³ potatoes and zucchini,⁴ whereas other recipients have presented with household items such as bottles⁵ and a 100-W light bulb.⁶ One sports fan presented with a rectally impacted baseball (clearly not the result of an aberrant pitch).⁷ The longest retention of an FRO was described in a 70-year-old man who had carried a battery-powered vibrator in his rectum for 6 months, having travelled around the world during this period.⁸ The author of this report described this (in "tongue-in-cheek" fashion) as "the longest lasting, best travelled rectal foreign body yet reported." The rectal route has also been used in a homicide, with the unfortunate victim dying after the rectal insertion of a walking stick.⁹ Finally, a patient required abdominoperineal resection after the insertion of a concrete mix enema by his sexual partner during an amorous encounter led to a profound case of constipation.¹⁰

Among prison inmates, the rectal cavity has long been used to hide contraband of all types, including drugs, weapons and tools to be used in escape plans. Arguably the most famous prisoner who routinely used the rectal route to hide contraband was Henri Charrière, an inmate of the French "Devil's Island," as described in his autobiographical book *Papillon*.¹¹

Escapes by inmates of federal institutions from public hospitals have been relatively uncommon in Canada. One dramatic escape was effected in 1975 by a notorious inmate of Joyceville Institution, who collapsed while jogging in the prison yard.¹² When guards were unable to detect a pulse, he was rushed by ambulance to the same hospital involved in the current case report. Here, waiting armed accomplices assisted in the escape of this very healthy appearing inmate from the ambulance bay. In the past 10 years, inmates of federal institutions have escaped from hospitals in Canada on 17 occa-

sions (Mr. Yvan Thibault, Correctional Service Canada, Ottawa, Ont.: personal communication, 1999). These escapes involved 10 inmates from minimum-security institutions (wearing no handcuffs or other restraints), 6 inmates from medium-security institutions (one set of restraints) and only one from a maximum-security institution. This last prisoner had hidden a key to his shackles in a pack of cigarettes, which he produced and used during an unescorted washroom visit. During the subsequent investigation, it was pointed out that the escape could have been prevented had the escorts realized that the inmate was (uncommonly) a nonsmoker. Despite the low number of escapes, stolen or homemade security and handcuff keys are found regularly in the possession of inmates. A review of security records for federal prisons revealed 110 reports of contraband keys found in the possession of inmates over the past 10 years (Mr. Yvan Thibault, Correctional Service Canada, Ottawa, Ont.: personal communication, 1999). This information (including a reference to the present case) is available within the public domain from Correctional Service Canada. Seven of these reports specifically mention keys discovered during body cavity or radiographic searches. The current case was the only one on record involving the incidental discovery of a key during the rectal insertion of analgesics in the course of routine hospital care.

In summary, the pre-emptive administration of analgesics has been shown to provide clear benefits in reducing postoperative opioid requirements. We present the first report of an unexpected benefit of pre-emptive rectal analgesic administration: the foiling of a possible escape from custody of an inmate of a federal penitentiary. This may indeed represent the "key" to postoperative analgesia.

This article has been peer reviewed.

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