




Editorial

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# The Use of Cocaine and Derivatives and the Cancellation of Surgery

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In the 3<sup>rd</sup> national survey on drug use by the Brazilian population conducted by Fiocruz in 2017, it showed that approximately 1.2 million individuals 12 to 65 years of age were addicted to some substance other than alcohol or tobacco [1]. In the USA about 130 Americans die every day from an opioid overdose, and in 2017 alone, 47,600 fatal overdoses occurred in America which involved at least one opioid [2].

Cocaine or benzoylmethylecgonine is a central nervous stimulant and an anesthetic; it is extracted from the leaves of the *Erthroxylon coca* plant. This salt is freely soluble in water, which allows it to be injected, but its lipid solubility also enables it to be absorbed through the nasal mucosa [3]. Crack is manufactured by dissolving cocaine hydrochloride in water, mixing it with baking soda and heating [4]. Crack cocaine can be smoked by inhaling the vapors from heated crystals or by mixing with tobacco and gives a characteristic 'cracking' sound when heated. Extremely rapid absorption occurs with both intravenous and inhalation (smoking) routes, with a rapid peak concentration in the brain, and shorter behavioral and psychological effects.

Cocaine has a short half-life in plasma around 90 minutes and is rapidly hydrolyzed in plasma [5]. Its metabolites have no stimulating action and its urine test can be positive in 6 to 14 days. The urine cocaine test is a poor marker for acute poisoning reflecting only that it has been used in the recent past [4].

The cancellation of surgery is an important indicator for the management of the Surgical Block, leaving the institution to seek improvements aiming at more quality in patient care and better cost control. This search for better results requires the commitment of all involved (management and health professionals), either through the implementation of Surgical Programming in all Clinics, or in the search for the identification of preventable causes thus improving communication and action planning in order to minimize suspensions. Traditionally, elective surgeries for recent cocaine users are canceled and postponed. Although there is no consensus and little scientific evidence, a survey conducted in 2010 with an anesthesiologist showed that 30% believe that it is prudent to wait up to 7 days after a positive cocaine test before performing the surgical procedure [6].

Cocaine toxicity is a clinical diagnosis, as signs of toxicity do not correlate well to measured blood concentrations of cocaine [7]. In conclusion, surreptitious perioperative cocaine use does occur, with a normal ECG and without clinical signs of cocaine toxicity may proceed safely with surgery. The cost of postponing surgery is much higher, especially without clinical evidence of cocaine poisoning. However, prospective studies are needed to support this approach.

Cancellation is defined as a procedure in the map of surgeries created the day before its execution, but which was not performed. The costs of cancellation may vary between institutions and the type of surgical procedure. A retrospective analysis during 12 months of all plastic surgery cases, 23 cancellations in a single institution generated an estimated cost of £20,000 [8]. The cancellation of a surgical procedure has a cost for the patient, the family, the medical team and the hospital and gains for the paying source. In addition, there is what is called "opportunity cost" because another surgery is no longer performed.

The conduct of cocaine users (in different forms) and scheduled for elective surgery differs from the different services based on the individual anecdotes and personal experience. In our hospital, the established conduct is to wait 1 week. In orthopedic patients, often young, they are used again and again, so the suspension of surgery may generate a much greater expense. In order to modify the existing protocol in the hospital, we report two cases of men with chronic cocaine use, 31 hours and 10 hours after nasal cocaine use, submitted to spinal anesthesia for lower limb orthopedic sur-

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gery and peripheral nerve block for postoperative analgesia without any complications during the procedure, PACU and the ward [9]. Both patients were discharged 24 hours after the procedure without pain, after anterior lumbar plexus block and the lateral combined femoral-sciatic nerve block.

Studying 172 anesthesia departments in the Veterans Affairs on conduct in surgical patients using cocaine [10]. The response rate was high at 62%. More than half of the units serve patients who abuse cocaine at least once a week (52%). Two-thirds of respondents canceled or delayed patients with a positive screening regardless of clinical symptoms. Only eleven establishments (10.6%) have a formalized policy. The majority (80%) believe that it would be useful to have formal guidelines for the management of these patients. Given the lack of strong evidence in the literature, management of these patients in the surgical setting is not standardized. In this study, the majority of anesthesia departments (65%) would cancel patients who test positive for cocaine [9].

Neuroscientist Judith Grisel in her book *“Never Enough. The Neuroscience and Experience of Addiction”*, she attributes the success of her treatment to everything outside of her [11]. The Brazilian Health Service (SUS) serves the majority of the Brazilian population. Thus, patients who are admitted to elective surgery confirming the use of cocaine for more than 3 hours and without clinical signs of intoxication should not have their surgery postponed. Likewise, these patients do not have adequate treatment to keep them free from the illegal substance and wait a week. Society puts a lot of emphasis on the beginning of the treatment, but at the end of this treatment you are basically alone [11].

In the Brazilian context, it identifies whether a lack of services that take into account the needs and characteristics of users drug use, as pointed out by a systematic literature review [12]. Thus, waiting a week for sure the patient will not be properly treated and it will be very difficult to watch him so that he does not use cocaine again. So waiting a week or more for not having surgery is a procedure to be reviewed.

## Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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