



PBLD-Lecture: *The screaming patient in PACU, seemingly in pain.* (2019-1-15)

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The author has no financial conflicts related to this lecture.

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1. INTRODUCTION

Periodically a patient soon after awakening in the operating room, or upon arrival in the Post-Anesthetic Care Unit (PACU) is visibly severely distressed. They are restless and vocalizing a lot. Vocalizing may be crying, screaming, shouting or speaking strongly. The restlessness may entail persistent turning and repositioning on the bed or cart. Restlessness may be attempts to sit upright, and climb off the cart. Restless can also entail kicking off sheets or flailing with the arms. The patient is at risk to harm themselves or others.

That sort of post-anesthesia confusion behavior is not uncommon in children under the age of seven years of age. Generally, it is impossible to establish coherent verbal communication with the child in order to win their cooperation. That group will not be discussed here.

That sort of cognitive dysfunction and delirious behavior is not too dissimilar to that seen in aged person associated with aging related dementia after anesthesia. Generally, it is impossible to establish coherent verbal communication with the aged person in order to win their cooperation. That group will not be discussed here.

It is usually first assumed that these patients are suffering with pain, and additional analgesics are used to secure their placidness.

There is however another group of persons who are adults beyond puberty and still within functional working adult age limits. Their post-operative restlessness and vocalizing is striking, and identifiable as *different* to a patient only in severe pain. The patient in severe pain, can usually be

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made verbal contact with, and will respond with a lucid answer to a question sufficiently clearly and firmly stated to them. This group under discussion do not respond to verbal input.

The subgroup and subject of this lecture are those of this last group who cannot be verbally communicated with during their restlessness and vocalizing. Often healthcare providers, such as anesthesiologists, surgeons or nurses simply administer additional opiates. Sometimes that secures restfulness. Sometimes the extra opiates in total together with the opiates already administered before awakening, induce opiate-overdose respiratory-arrest.

Cases will be presented from the author's personal experiences and a discussion will follow.

2. Case number 1: Screaming lady after breast surgery.

A sixty-year-old lady presents for anesthesia and surgery. She undergoes a breast reconstruction involving transfer of abdominal wall tissues into the pectoral region with critical vascular micrografting. The surgery took five hours long. The patient is admitted to the Intensive Care Unit (ICU) due to the surgeon want close monitoring of blood pressure to protect the micro-vascular grafts. The lady is on established treatment for hypothyroidism, Atorvastatin for hyperlipidemia and risedronate for osteoporosis. The anesthetic was general, volatile based, and with intubation. For analgesia ketamine 50mg was administered during induction and hydromorphone 2 mg was titrated in through the awakening period. In addition, droperidol 6.25 mg and ondansetron 4 mg was administered for nausea prevention at the end of surgery.

Upon arrival in ICU the lady awoke sufficiently to start screaming uncontrollably. She was emotional and crying, and severely restless. She was unwilling to stay reclining on her back. The ICU physician diagnosed immediately under-treated pain and administered fentanyl 50µg and morphine 4 mg. That shortly resulted in the patient's silence as well as respiratory arrest and critical deoxygenation. Naloxone was next administered to restore respiration. Final patient outcome was satisfactory, and the case was submitted for discussion as a medical mishap.

PBLD discussion points;

- Who would have administered haloperidol preferably in the ICU than the opiates?
- Would anybody have examined the patient first, before giving opiates?
- How could one establish whether the patient's primary problem is under-controlled pain?

In later review of the case, discussion with all parties involved, and an interview with the patient a day later the following story was put together.

- a. PRE-ANESTHETIC. The patient had verbalized fear of experiencing awareness during her surgery. Her fear was rooted in the fact her deceased father had experienced awareness



during his last surgery. He also died seven days after the surgery due to the incurability of the pathology that he was operated for. The daughter however chose to describe his death as an anesthetic death.

Of note she never claimed to have had awareness during her anesthetic. Pre-operatively she also verbalized no concern about her breast cancer. She had had no bad events during her anesthetic for her prior mastectomy. She however repeatedly kept referring to aspects of her father and his death. He had died a few years prior. The patient's references to him would be out of context to the ongoing discussion between her and the anesthesiologist. In retrospect, the anesthesiologist realized she was obsessed about speaking on her father in many different ways. His death was still a dominating aspect to the lady patient even though a number of years had passed since the death. At the time of the pre-anesthetic assessment the anesthesiologist did not focus on that. The lady further gave an impression of being intelligent and having an energetic personality.

- b. DAY AFTER SURGERY. On that day the patient was well, and her pain was tolerable. She was able to participate in a sober conversation. She reported being confused in her early post-anesthetic period and seeing her father in her mind. She recalled dreaming very vividly the entire night that she was falling out of bed. Her father was also a character in her dreams. She in fact did not fall out of bed and nursing notes for the night were routine.

The lady remained obsessed with talking about her father. She hinted at having had relationship issues with her father and insecurities stemming from childhood and connected to her father.

PBLD. Any questions or comments or opinions on this case?

CONCLUDING COMMENTS.

The ICY physician had been too hasty to administer the opiates. The ICY physician should have attempted to establish from the patient how severe the pain was before administering the opiates. Often such a disorientated patient is incapable of describing a score on a ten-point pain scale. That patient however might have been able to give an affirmative or negative answer to more simple questions addressed very directly to her by someone strongly seeking to occupy her attention. A good question is "*Is the pain terrible?*" Yes means yes, and no means no. If the pain is not terrible then an acute psychotic condition should be suspected. A tranquilizer is a better choice to seek to calm the patient than an opiate.

Although not a known fact in this case, it is not uncommon for such cases that potentially are cases of Civilian-PTSD to involve childhood sexual abuse.

See the final discussion of all the cases as a group.



3. Case number 2. Fifty-six-year old pastor screaming after spinal surgery.

The male patient was generally healthy and clean living. He underwent his 5th back surgery, which was fusion from T10 to L4. He was given general anesthesia with a volatile drug and was intubated. Ketamine 50 mg was administered at induction, and near the conclusion of the surgery the post-surgical analgesic drugs were injected. They were ketorolac 60 mg intramuscular, 1000mg acetaminophen intravenous and 10mg morphine was all administered for analgesia. The surgery and anesthetic were uneventful.

In the Post Anesthetic Care Unit (PACU) when the patient was sufficiently awake he started to scream as if in distress, and look around confusedly. He did not respond to questions or any verbal input.

PBLD question. What would you do with this patient to handle his restlessness and screaming at this moment?

ACTIONS TAKEN. The anesthesiologist did a sifting full examination in about two minutes. It included auscultation of the chest, left and right, front and back. The surgical wound was inspected and revealed no blood seepage, not swelling or suggestion of hemorrhage. Both legs crudely seemed neurologically intact, and the abdomen was free of swelling and tenderness. Vital signs were satisfactory as well as the EKG. Nothing abnormal was suspected. The patient did not resist examination. The patient would comply with forcefully stated simple commands, but could not respond intelligently or with any sign of comprehension to any questions. The surgeon was called to confirm there was no surgical crisis, in particular no acute spinal hematoma. The surgeon was satisfied.

MEDICATIONS. Haloperidol ("Haldol") was injected. The first dose was 2 mg and mild calming effect was seen after 2 minutes. An additional 1 mg was next injected, and further calming of the patient was observed after another 2 minutes. Another 1 mg was injected and after 2 minutes the patient ceased screaming and lay restfully with closed eyes but was rousable.

OUTCOME. No additional analgesia was given. The patient was transferred to the general nursing ward after a period of observation. The patient awoke about 4 hours later and was able to operate his PCA morphine pump satisfactorily. All patient aspects were further routine and uneventful.

SECOND DAY PSYCHOLOGICAL INTERVIEW. The patient revealed psychological information the following, upon exploratory discussion and gentle questioning. He had had a very emotionally abusive childhood from a very strict father. He had responded to that with being a slight rebel. One day he took his father's car, at the age of 15-years-old, and drove it illegally and without permission. He had a bad motor crash. He had a back injury, a femur fracture, and multiple facial fractures. He was fully awake during his corrective facial surgery and it was an extremely traumatic experience. He had regular nightmares for 6 months after his facial surgery, and periodically for the rest of his life. His father forced him to pay for the vehicle repairs, and he worked all his youth weekends and vacations.



The anesthesiologist met the patient's wife too, and she was a pleasant lady. She worked non-stop on her computer during her visiting and even during conversation with the anesthesiologist. Her visits were however so short and infrequent the nurses reported never seeing her. She otherwise seemed a fully devoted and loyal wife. The nurses also commented that the patient received no get-well-cards, gifts or other visitors. They commented that is unusual for church ministers when they are patients. Normally church ministered receive a flood of well-wishing visitors, cards, flowers and gifts.

Patient comments to the anesthesiologist during the postop visit was that "The worst things in life are Christians". The patient also said; "The best things in life are discovering the real ones" (presumably Christians).

CONCLUSION. Post-anesthesia the patient had experienced an acute conversion reaction, or an acute psychosis, or a PTSD related event with vivid recollection of traumatic events. The patient was a good person struggling to deal with memories of a traumatic childhood. The back surgery was a culmination of his car crash in childhood and an intense reminder of the bad memories. It seemed his religious community was very small. He was likely a very intense person in his daily life, and not prominently endearing to people.

It was very good that he did not receive extra opiates in the PACU, and that he got haloperidol instead. It can thus be concluded, that the surgery and anesthetic were each successful, and mishaps were avoided.

PBLD questions. Would anybody do anything different? Does anybody have questions, opinions, or other comments? Does anyone have related anesthesia experiences?

SUMMARY - POST-OPERATIVE OBJECTIVES IN SUCH A CASE.

1. Exclude an unexpected surgical or medical complication.
2. Determine if there is second source of pain, to that of the surgery.
3. Evaluate whether the sum of the analgesia already given up to arrival in PACU is probably adequate.
4. Consider acute agitation / confusion / conversion reaction / PTSD.

Antipsychotic tranquilizers are safer than opiates in a screaming restless patient.

4. Case number 3. A lady after a D&C awakens crying very emotionally.

The setting was a small rural town. The lady underwent a diagnostic cervical dilatation and curettage under general anesthesia. She was fully healthy otherwise. The procedure is minimally painful afterwards. In PACU the patient started crying inconsolably.

Quick general medical examination revealed no hint of unexpected complications. A direct simple question was asked of the patient; "Does it hurt a mighty lot and very little?" The patient's reply was; "No doctor. It doesn't hurt".



No drugs were prescribed. The nurses caring for the patient were reassured that all was well. They were told to let her cry. A psychology follow-up was planned for that evening.

At the discharge evening visit the anesthesiologist, who was the patient's family doctor as well, took the patient to a private conversation room. It was revealed that the lady had one child, and a husband who was having an extramarital sexual affair. This matter had only been discovered about two months prior. The husband was unwilling to divorce, and unwilling to desist from the extra-marital affair. The woman was emotionally confused and severely distraught about these matters. She predominantly wanted to preserve her marriage.

The residual anesthetic effects in the PACU, had simply disinhibited her control all the emotions she was carrying. The anesthesiologist-cum-family-doctor offered general advice and information about marital counselling and psychological resources.

The same anesthesiologist experienced four more identical cases of uncontrollable crying in the PACU following trivial surgery in ladies with very similar personal stories. Those was over a 6-year period.

The case illustrates how anesthesia can reveal deep intense emotions in the recovery period. Having some understanding of these matters, and having an ability to recognize them, assists one avoid getting into situations of dangerous opiate overdosing.

5. Pain-suggestive post-anesthetic cognitive-dysfunction or delirium.

Pain-suggestive post-anesthetic cognitive-dysfunction or delirium is a working term for an as yet poorly defined and poorly described concept. It represents less a diagnosis, and more a clinical problem. The preceding discussed cases fit into this term. The challenge is to recognize it, in a very confusing environment, where every urge is to administer opiates. Such cases are not met daily or weekly but are met more often than annually. Awareness of this concept, and seeking to find patients where a tranquilizer like haloperidol would be better administered than opiate will contribute to patient safety overall. The tranquilizer wins the patient more time to recover from the residual anesthetic drug effects, and allowing them to return to their normal emotionally inhibited states of life.



Pain-Suggestive Post-Anesthetic Cognitive Dysfunction



Sherlock Holmes- Fictional Victorian London super detective.

- The author **Sir Arthur Conan Doyle** was a medical doctor who wrote stories.
- If you have a confusing patient; examine them. It brings you closer and you might observe subtleties that are valuable clues. LOOK - TOUCH

The greatest fictional detective's way of think and examining, was modeled precisely on how the author, a doctor, was taught to look at and examine a patient with an undefined problem.

When such a potential patient presents A shrewd and intelligent total patient assessment is needed. That does not mean check-box ordering long list of radiological examinations and laboratory tests. Such tests should only be ordered to affirm an already suspected problem. Above all, do a swift physical examination. It is remarkable how many catastrophic rare problems can be eliminated in a short two minutes physical examination. The exam can also be focused based on the surgery done. The likelihood of a positive finding is rare, but the correct finding of something will be a once or twice in a career life preserving event for the patient. Those sort of medical or surgical calamities that one could discover will all be recognized eventually, but then often too late to preserve the limb or a life.

Look for clues of a surgical complications like splenic bleeding, or ischemia. Look for medical complications like stroke or myocardial infarct. Exclude if judged necessary, hypoglycemia, hypothermia, hypotension, hypovolemia, hypokalemia, hyponatremia, and oliguria. One is also looking for second causes of pain other than the surgery itself.

After that basic PACU exam first step, one can then consider diagnosing suggestive post-anesthetic cognitive dysfunction or delirium.

PRE-ANESTHETIC CLUES towards the post-anesthetic problem. With much clinical experience one can learn to pre-empt the postoperative problems under discussion. Often it is only in hindsight and after a substantial interaction with the patient days after the events, that one recognizes that there were actually little clues in the pre-anesthetic discussion. One cannot see the clues if the pre-anesthetic discussion is rushed, focused on administrative processes and limited to reading electronic records and swift superficial physical examinations of the airway. The clues best become apparent if one spends a few minutes of casual conversation with the patient and interact with them amongst their accompanying friends or family.

The clues are when a patient expresses deep private emotional anxieties shortly before anesthesia. The comments may seem trivial initially. The comments are often expressed obliquely and out of context of the casual conversation flow. That is the clue. If one pursues that clue one can elicit many traits of PTSD. The patient may admit to obsessive thinking about the emotional matter, and also having nightmares about it.

The goal of the anesthesia provider is not to be psychotherapist. The goal is for the anesthesia provider be able to exclude that the restlessness and vocalizing of the PACU patient is not due to severe pain. Then one can diagnose a psychological or psychiatric crisis that is better handled with major tranquilizer like haloperidol than with an opiate. The immediate goal is achieving situation control with no harm being done.



6. PTSD after anesthesia and surgery.

There are case reports of prior diagnosed Post Traumatic Distress Disorder (PTSD) patients having acute emotional crises precipitated after anesthesia¹. It is likely much under-reported due to anesthesiologist associating the emergence delirium with that seen in children under seven years of age or in aged patients with early dementia. Anesthesia providers are significantly under trained and unaware of psychological matters generally. These patients appear awake but do not respond to verbal inputs. They look at one but do not seem to hear what one says. The PTSD patient in the PACU may cry, scream, or verbalize some element of their nightmare. This emotional state can last from 15 minutes up to two hours, after anesthesia when all drug is removed from the body.

The diagnosis of PTSD is very strictly defined in The Diagnostic and Statistical Manual of Mental Disorders (DSM-5 2013)². The DSM criteria are strict for special reasons. The diagnosis depends entirely upon reports from the patient and it is possible to pretend to have PTSD. A US soldier who has seen combat and who is rated as having a 100% disability due to PTSD, qualifies for a Veterans' Administration (VA) lifetime \$3527 monthly tax-free allowance, in addition to other allowances and social security income. PTSD is however a real condition with many real sufferers. Persons can acquire PTSD unrelated to military combat events in their life. These civilian cases often do not own the label of having PTSD but may present for surgery and anesthesia. These civilians may not fulfill the strictest diagnostic criteria applied to former combat soldiers, but may still be very emotionally burdened. They can also present with delirium imitating severe pain after anesthesia.

DIAGNOSIS of PTSD³:

PTSD follows an emotionally traumatic event, whether physical or not in nature. The event could represent a solitary moment in that person's life or a sustained series of human interactions. Symptoms of PTSD include episodes of reliving or re-experiencing the event, avoiding things that remind the individual about the event, feeling on edge, and having negative thoughts. Nightmares, flashbacks, bursts of anger, difficulty concentrating, exaggerated startle response, and difficulty remembering aspects of the event are just a few possible symptoms that people with PTSD might experience. **Anesthesia can trigger those symptoms by disinhibiting conscious self-control.**

Criteria for Military diagnosis of PTSD. The patient must fulfil one or two points, as specified, in each criterion group. This list is abbreviated in this lecture. See references for fuller details.

Criteria.

- Criterion A: Exposure to an **unhappy event** (e.g. a soldier's death)
- Criterion B: **Upsetting dreams, memories**, flashbacks.
- Criterion C: **Avoidance** of trauma associated stimuli.
- Criterion D: **Negative feelings** - feel isolated, find it hard to be happy, low self-esteem, despondent view of life.
- Criterion E: **Startle reactions, irritability, altered sleep.**
- Criterion F: Symptoms are **long lasting** – months / years / decades.
- Criterion G: Symptoms **interfere with life.**
- Criterion H: Symptoms **not due to** drugs or disease.



7. CIVILIAN P.T.S.D.

The term of PTSD is so closely associated with USA military that it seems a diagnostic requirement is having witnessed combat deaths close-hand, and to be a severely dysfunctional unemployed person. There are good reasons for having strict military diagnostic criteria. In reality civilians can all have experienced a spectrum of emotional events in their lives that they relive via periodic nightmares, obsessive thoughts and a degree of altered social and societal behavior. Many of those persons likely do not even know that they have the symptomology of PTSD. Clearly there is a spectrum of stress disorders that qualify for the diagnosis of PTSD, outside of the military setting with disability allowances.

We can call this slightly more loosely diagnosed group “Civilian-PTSD”⁴.

Stress and PTSD have also been classified by some as having 5 grades of severity⁵;

1. Normal stress response.
2. Acute stress disorder. The stress behavior follows in continuity from a single profound stress causing event. The event commonly involves a massive loss of property and even with lives lost too.
3. **Uncomplicated PTSD.** The patients that present unexpectedly after anesthesia with emotional behavior of vocalizing and disconnection, all simulating extreme pain, form the group under discussion in this lecture. They may mostly qualify for the diagnosis of Uncomplicated PTSD. Uncomplicated PTSD as a term could be used instead of “Civilian PTSD”.
4. Comorbid PTSD. These individuals are usually severely depressed and drug addicted.
5. Complex PTSD. These individuals are severely socially and societally dysfunctional. They often carry other psychiatric diagnoses.

Many PTSD sufferers are also victims of childhood sexual abuse.

Why is civilian PTSD or uncomplicated PTSD of interest to anesthesia providers?

It is well known that socially imbibing alcohol can disinhibit a person's concealed burning emotions. Drunk persons get labeled as happy-drunks, or sad-drunks, or angry-drunks. Their drunk behavior reflects the dominant emotions they normally quietly carry and feel through their daily lives. Recovering from anesthesia also has potential to release extreme emotional experiences in persons with PTSD. The person relives those emotions with intense mental visual recollection of the negative events until the very last effects of anesthesia have dissipated about two hours later. The persons may be open eyed, but not be in cognitive comprehending and communicative condition.

The importance of this surprise patient condition is to recognize it, separate it from unexpected medical and surgical pathology causing severe pain, and then not to administer an excess of opiates as a remedy. The situation could then be better controlled by administering haloperidol or a similar tranquilizer.



How to assess and identify Civilian-PTSD during the pre-anesthetic visit.

This is unresearched and only reflects this author's personal clinical experience and interest in this subject to date. If during the pre-anesthetic assessment the patient expresses any fears or anxieties, with any references to past emotional memories, all entirely unrelated to the day, then ask three questions. The three questions are;

1. Have you ever had nightmares about that?
2. Do you ever feel sad thinking about that?
3. Have you ever before awoken from anesthesia crying inconsolably, showing aggression, or being agitated?

If the reply to any all questions is negative, then proceed as per routines and not worry. If the reply to any one question is affirmative then consider taking the following actions;

1. Consider **ketamine 50 mg** to the induction anesthesia drugs. It's anti-hyperalgesia effects will help optimize opiate analgesia after anesthesia. It has been shown to ameliorate PTSD symptoms.
2. Strongly consider the administration of **1 to 2 mg haloperidol** immediately after extubation. Be willing to titrate in more haloperidol as needed for evidenced restlessness or agitation.
3. **Apply maximum analgesia therapy.** Use regional anesthesia of any form. (Skin infiltration, nerve blocks, etcetera, as befits the surgery). Use NSAIDs. Use Acetaminophen (oral, IV, or rectal at a maximum dose). Ensure a long acting opiate, e.g. morphine, is initiated 30 minutes prior to awakening, to a dose expected to provide reasonable analgesia.
4. **Be strongly verbally reassuring to the patient at all times while awake.** Say things like *"I am here for you. I am looking after you"*. Repeat this message often.
5. **Distract and control the patient's thoughts totally in the last 2 to 4 minutes before induction of anesthesia.** Do not leave the patient to think their own thoughts for one second during the last minutes before losing consciousness. Create any harmless image and "work it". For example, say *"Imagine you just won the lottery. Imagine you are now going on a lazy beach vacation in Hawaii for one long happy month. Imagine you are walking along the beach at sunset with the person in the world you would most want at your side. Imagine the good food and the Hawaiian music . . . etc."*. Maintain that chatter until the patient has closed eyes not responsive to eyelash touching.
6. Avoid midazolam⁶. One non-peer reviewed, and non-PubMed-listed case report suggested Midazolam could worsen post anesthesia PTSD symptoms. This needs much more validation from more reports or studies. This author suggests use midazolam if judged otherwise useful to relieve anxiety.

Following this routine for hundreds of patients that the author thought were potentially persons who would wake up distressed and disorientated, all awoke comfortably and peacefully. This is however only anecdote in the absence of good science on the subject.



What is civilian-PTSD or uncomplicated-PTSD not related to? This condition associated with post-anesthesia delirium and vocalizing is unrelated to confused pediatric patients under 7 years old. It is also unrelated to aged person demonstrating post-anesthesia cognitive dysfunction or delirium as part of dementia. Civilian-PTSD and uncomplicated-PTSD affects young adults through pre-aged adults who seem to be sharp and intelligent on first meeting.

8. Ketamine and PTSD

Ketamine has been researched in its use for PTSD and related conditions. Donoghue (2015) studied its use in children aged 7-years old. The children all had disrupted emotional attachments to their care givers. After receiving doses of 10mg the children showed eight days of improvement in their aggression and emotional dysregulation. Feder (2014) administered low dose ketamine to adults diagnosed with PTSD and observed large symptom improvement.

Morena (2017) studied ketamine in rat model of PTSD. Their results are controversial and their conclusion invalid⁷. The rats were subjected to a PTSD causing process of stress for a number of days. That was then immediately followed by anesthesia with three drugs. The drugs were propofol, ketamine, and dexmedetomidine. There was a placebo group. Their observations were interpreted as that dexmedetomidine impaired the memory of the stress training and prevented rat PTSD developing. Propofol and ketamine did not do that. They stated that ketamine thus promoted the development of PTSD. That last statement is incorrect and must not be interpreted that ketamine is bad for established PTSD suffers in humans. The Rat study ONLY show that dexmedetomidine impaired memory imbedding and ketamine did not impair memory imbedding during the development phase of PTSD. This rat model is a poor and limited model of human PTSD.

A retrospective study by McGhee of US soldiers being treated for acute combat acquired burns strongly showed the incidental use of ketamine during anesthesia reduced the later diagnosed incidence of PTSD amongst the soldiers by 40%⁸.

OTHER USES FOR LOW DOSE KETAMINE (50 ng IV for adults.) (with 1 mg midazolam if not anesthetized)

- Short duration for procedural analgesia. (5 to 10 minutes)
- Treat depression;
 - Reverses suicidal ideation within an hour
- Reverse opiate induced hyperalgesia or opiate tolerance. The anti-hyperalgesia benefit lasts 18 to 30 hours,
- Reduce PTSD symptoms.
- Preserve spinal cord from ischemic damage.
- Reduce post-cardiac-bypass confusion. (brain function preserving)
- Anti-hyperalgesic for hyperalgesia induced by any drug (cocaine, marijuana, alcohol nicotine)
- Anti-emetic.
- General anti-inflammatory (in animal research)



DANGERS OF KETAMINE ADDICTION.

Ketamine addicts develop hepatic fibrosis, kidney fibrosis, ureter fibrosis and bladder fibrosis. It is said a ketamine addict will die young with a urine collection-bag attached to the skin directly over their transplanted kidney.

9. GENERAL TREATMENT OF P.T.S.D.

The general treatment of PTSD sufferers is beyond the scope of this article. This article is only concerned with the care an anesthesiologist, or other anesthesia provider, can offer a potential or diagnosed PTSD sufferer in the immediate peri-operative period.

The Veteran's Association and Department of Defense republished their treatment guidelines in 2019 in JAMA⁹. The emphasis of care was on Trauma Focused Psychotherapy (TFP). Use of cannabis (plus associated extracts) and benzodiazepines was advised against. The use of other psychopharmacotherapy had only a small questionable role to play, and specific listed drugs were either recommended against and some were permitted. All advice was based on scientific evidence.

10. CONCLUSION

It is impossible to do a formal PACU psychological or psychiatric assessment of an acutely disturbed patient lying in the PACU. The first priority of the anesthesia provider is to do no harm. Next exclude surprise surgical or medical complications or pathology causing a second and an extra pain to that of the surgery.

Where the anesthesia provider believes the patient awaiting anesthesia is a possible risk for acute emotional disturbance after anesthesia there is a preventive plan. The plan involves elementary psychotherapy immediately preceding induction. Be strongly reassuring with emphasis on a positive friendly relationship, and distract the patient's thoughts with pleasant happy mental imagery. Include a small ketamine dose early in the case. Ensure optimal analgesia in effect prior to awakening the patient. Administer a prophylactic dose or 1 to 2 mg haloperidol after tracheal extubation.

Opiates are very unsafe sedatives. Opiates only cause restfulness at the price of respiratory suppression. The best sedation for patient who is not in good verbal contact is a major tranquilizer, such as haloperidol. It is far more efficacious than benzodiazepine.

Arrange for a psychological assessment follow up at a later non-urgent time. The anesthesia provider could make the next contact at a follow-up anesthesia visit, or the family physician, but a psychologist should preferably be involved at some point even if further down the line too.

The incidence of persons experiencing PTSD at some point within their life-times is estimated to be between 6% and 7% of the USA population. Of veterans of war attending the VA hospitals 10.6% carry the diagnosis of PTSD. Of veterans of the wars in Iraq and Afghanistan attending VA hospitals 26.7% have received a PTSD diagnosis.



It is likely the civilian incidence of PTSD is very underdiagnosed, as civilian PTSD sufferers have no financial advantage in carrying the diagnosis. Furthermore, PTSD sufferers tend to internalize their symptoms and conceal them.

The big relevance of PTSD to anesthesia providers is the need to consider the possibility a patient having a certain post-anesthesia behavior might be a PTSD sufferer. Then the critical thing is not to use additional opiates which could result in a fatal opiate overdose, but rather temporally use major tranquilizers to control the situation to allow residual anesthesia drug effects to dissipate.

PBLD. Does anyone have a question, a comment, an opinion or a similar patient experience to share?

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³ Book. "DSM". Diagnostic and Statistical Manual of Mental Disorders, (5th edition). Washington DC. 2013

⁴ Nauert R. Is PTSD a brain disease? Internet. 2012 July 11th. PsychCentral. www.psychcentral.com/news/2012/07/11/is-ptsd-a-brain-disease/41437.html

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⁸ McGhee LL, et al. The correlation between ketamine and post-traumatic stress disorder in burned service members. J Trauma 2008 Feb;64(2 suppl):S195-8.

⁹ Ostacher MJ, et al. Management of Posttraumatic Stress disorder. JAMA. 2019 Jan.321(2):199-201