

Trauma MedEd

Treating Trauma VIPs: More Is Better?

The VIP (very important person) syndrome occurs in healthcare when a celebrity or other well-connected "important" person receives a level of care that the average person does not. This situation was first documented in a paper published in the 1960s which noted that VIP patients have worse outcomes.

VIPs have the expectation that they can get special access to care and that the care will be of higher quality than that provided to others. Healthcare providers often grant this extra access, in the form of returned phone calls and preferential access to their clinic or office. The provider tries to provide a higher quality of care by ordering additional tests and involving more consultants. This idea ignores the fact that we already provide the best care we know how, and money or fame can't buy any better.

Unfortunately, trying to provide better care sets up the VIP for a higher complication rate and a greater chance of death. Healthcare consists of a number of intertwined systems that, in general, have found their most efficient processes and lowest complication rates. Any disturbance in this equilibrium of tests, consultants, or nursing care moves this equilibrium away from its safety point.

INSIDE THIS ISSUE

- 1 **Treating Trauma VIPs: More Is Better?**
- 2 **Bathing And Showering With A Wound**
- 2 **NSAIDS And Fracture Healing**
- 3 **The Rectal Exam In Trauma**
- 3 **Contrast Blush In Children**
- 4 **Cognitive Rest After TBI**

TRAUMA CALENDAR OF EVENTS

ADVANCES IN TRAUMA

PLACE: WESTIN CROWN CENTER, KANSAS CITY, MO

DATE: DECEMBER 7-8, 2012

EMCRIT TRAUMA CONFERENCE – CRITICAL TRAUMA IN THE ED

PLACE: MOUNT SINAI MEDICAL CENTER, NEW YORK, NY

DATE: JANUARY 9, 2013

TRAUMA ADAGE

"The better is the enemy of the good"

- From the poem "The Prude Woman" by Voltaire, 1772.

This adage is particularly important in medicine. Every test and treatment we order has an upside (hopefully) that will reveal something or make our patient better. Unfortunately, we tend to ignore the inescapable downsides, which include cost and unanticipated consequences. These consequences are the discomfort, side effects, and dangers that come with any medical intervention. And in some cases, the results of an unneeded test may be in error or show some red herring that leads us on a wild goose chase of other interventions that compound the danger.

Every test has its own set of possible complications. Each consultant feels compelled to add something to the evaluation, which usually means even more tests, and more possible complications. And once too many consultants are involved, there is no "captain of the ship" and care can become fragmented and even more inefficient and dangerous.

How do we avoid the VIP Syndrome? First, explain these facts to the VIP, making sure to impress upon them that requesting or receiving care that is "different" may be dangerous to their health. Explain the same things to all providers who will be involved in their care. Finally, do not stray from the way you "normally" do things. Order the same tests you usually would, use the same consultants, and take control of all of their recommendations, trying to do things in your usual way. **This will provide the VIP with the best care possible, which is actually the same as what**

everybody else gets.

Reference: "The VIP Syndrome": A Clinical Study in Hospital Psychiatry. Weintraub, *Journal of Mental and Nervous Disease*, 138(2): 181-193, 1964.

Bathing And Showering With A Wound

I love to hate dogma. And there's probably nothing in surgery more sacred and more ingrained than how to take care of a wound. Everybody knows that you have to keep surgical or traumatic wounds dry, and that once you can get them wet, showers are good at baths are bad. Right?

And for something as common as wound management, there must be some kind of research, right? Not so! I did quite a bit of digging through the literature since 1966 and managed to find only five papers. Here are the highlights:

- A prospective study of 100 patients were randomized to shower or bathe postoperatively. Of note, the wounds were sprayed with a clear plastic dressing before getting in the water. The was no difference in infection rates.
- Another prospective study of 100 patients with stapled incisions after spine surgery were allowed to bathe after 2 to 5 days. Compared to historical controls, there were no differences in infection rates even though the study patients had more complex operations than controls.
- A prospective randomized study of 121 patients after hernia surgery found no difference in infection between shower and dry groups
- A large randomized study of 817 patients similarly showed no difference between shower and dry groups
- Another randomized trial of 170 patients showed no difference in infections between shower after 24 hours and control groups

Get the picture? And interestingly, the few wound infections documented in any of the studies tended to occur in the dry groups, although this was not statistically significant.

Bottom line: In general, it is not harmful to get a wound wet after 24 hours. We don't know exactly why because of the paucity of the literature, but think about it. The water that we shower or bathe

in is the same water that we drink. It's very close to sterile. When we do shower or bathe, the bacteria that come in contact with the wound are our normal skin flora, which are already in and on the wound. Plus, most incisions that have been closed are water-tight within about 24 hours. It's more likely that using soap and water is good for you because it washes away tons of bacteria, including the pathogens!

References:

1. *Prospective randomised trial of the early postoperative bathing. BMJ* 19 in June 1976: 1506-1507, 1976.
2. *Wound care after posterior spinal surgery. Does early grading affect the rate of wound complications? Spine (Phila PA 1976)* 21(18):2160-2162, 1996.
3. *Does a shower with postoperative wound healing at risk? Chirurg* 68(7): 715-717, 1997.
4. *Modification of postoperative wound healing by showering. Chirurg* 71(2):234-236, 2000.
5. *Postoperative wound healing in wound-water contact. Zentralbl Chir* 125(2):157-160, 2000.

NSAIDS And Fracture Healing

Trauma hurts like hell. Over the years, we've developed quite a few ways of combating this pain. A number of drug classes have been developed to reduce it. One of the more common non-narcotic drug classes are the NSAIDs. As I've mentioned before, every drug has dozens of effects. Drug companies market a particular medication based on one of the predominant effects. All the others are considered side effects.

NSAIDs are not unique; they have lots of side effects as well. In 2003, several papers brought to light possible interactions between these drugs and fracture healing. Specifically, there were questions about these drugs interfering with the healing process and of increasing the number of delayed unions or nonunions. But once again, how convincing were these papers, really?

It would seem to make sense that NSAIDs could interfere with bone healing. This process relies heavily on the regulation of osteoblast and osteoclast function, which itself is regulated by prostaglandins. Since prostaglandins are synthesized by the COX enzymes, COX inhibitors like the NSAIDs should have the potential to impair this process. Indeed, animal studies

in rats and rabbits seem to bear this out.

But as we have seen before, good animal studies don't always translate well to human experience.

Although a study from 2005 suggested that NSAID administration in older patients within 90 days of injury had a higher incidence of fracture nonunion, the study design was not a very good one. It is equally likely that patients who required these drugs in this age group may have been at higher risk for nonunion in the first place.

In fact, there are no large, prospective randomized studies that have explored the effect of short-term or long-term NSAID administration on fracture repair. But there have been several smaller studies that showed absolutely no effect on nonunion with short-term administration of this drug class. Yet the dogma that leads us to avoid giving these drugs persists.

Bottom line: Once again, the animal data is clear but the human data is not. Although there are theoretical concerns about their use, there is not enough solid risk:benefit information to abandon short-term NSAID use in patients who really need them. NSAIDs can and should be prescribed in patients with short-term needs and simple fractures.

References:

1. *Effects of nonsteroidal anti-inflammatory drugs on bone formation and soft-tissue healing. J AM Acad Orthop Surg 12:139-43, 2004.*
2. *Effect of COX-2 on fracture-healing in the rat femur. J Bone Joint Surg Am 86:116-123, 2004.*
3. *Effects of perioperative anti-inflammatory and immunomodulating therapy on surgical wound healing. Pharmacotherapy 25:1566-1591, 2005.*
4. *Pharmacological agents and impairment of fracture healing: what is the evidence? Injury 39:384-394, 2008.*
5. *High dose nonsteroidal anti-inflammatory drugs compromise spinal fusion. Can J Anaesth 52:506-512, 2005.*

The Rectal Exam In Trauma

It has long been standard operating procedure to perform a digital rectal exam in all major trauma

patients. The belief has always been that valuable information about blood in the GI tract, the status of the urethra, and the neuro exam (rectal tone) could be gleaned from the exam.

Unfortunately, the exam also serves to antagonize or even further traumatize some patients, especially those who may be intoxicated to some degree. On a number of occasions I have seen calm patients become so agitated by the rectal that they required intubation for control.

So is it really necessary? A study in 2001 conducted over a 6 month period showed that the rectal exam influenced management in only 1.2% of cases. The authors felt that there was some utility in 3 special cases:

- Spinal cord injury – looking for sacral sparing
- Pelvic fracture – looking for bone shards protruding into the rectum
- Penetrating abdominal trauma – looking for gross blood

A more recent 2005 study was also critical of the rectal exam and found that using “other clinical indicators” (physical exam and other diagnostic study information) was at least equivalent, changing management only 4% of the time. They concurred with the first two indications above as well.

Bottom Line: For most major trauma patients, the rectal exam is not worth the patient aggravation it causes. I still recommend it for the 3 special cases listed above, however, as there are no equivalent exams for these potentially serious patient problems.

References:

1. *Porter, Urcic. Am Surg. 2001 May;67(5):438-41.*
2. *Esposito et al. J Trauma. 2005 Dec;59(6):1314-9.*

Contrast Blush In Children

A contrast blush is occasionally seen on abdominal CT in patients with solid organ injury. This represents active arterial extravasation from the injured organ. In most institutions, this is grounds for call interventional radiology to evaluate and possibly embolize the problem. This thinking is fairly routine and supported by the literature in adults. However, it cannot be generalized to children!

Children have more elastic tissue in their spleen and tend to do better with nonoperative management than adults. The same holds true for contrast blushes. The vast majority of children will stop bleeding on their own, despite the appearance of a large blush. In fact, if children are taken to angiography, it is commonplace for no extravasation to be seen!

Angiography introduces the risk of local complications in the femoral artery as well as more proximal ones. That, coupled with the fact that embolization is rarely needed, should keep any prudent trauma surgeon from ordering the test. A recently released paper confirms these findings.

The only difficult questions is "when is a child no longer a child?" Is there an age cutoff at which the spleen starts acting like an adult and keeps on bleeding? Unfortunately, we don't know. I recommend that you use the "eyeball test", and reserve angiography for kids with contrast extravasation who look like adults (size and body habitus).

Reference: What is the significance of contrast "blush" in pediatric blunt splenic trauma? Davies et al. J Pediatric Surg 2010 May; 45(5):916-20.

Cognitive Rest After TBI

One of the more commonplace recommendations for recovery from mild traumatic brain injury (TBI) is "cognitive rest." Sports medicine professionals recommend it, physiatrists recommend it, and trauma professionals talk about it.

First, what is it, exactly? I've seen a number of descriptions, and they vary quite a bit. The main concept is to avoid all activities that involve mental exertion. This includes using a computer, watching TV, talking on a cell phone, reading, playing video games, and listening to loud music. Huh?

What good does this allegedly do? Most articles that I've read theorize that cognitive activity somehow increases the metabolic activity of the brain and that this is bad. One of the more interesting papers I read (from 2010!) says it best: "It is now well-accepted that excessive neurometabolic activity can interfere with recovery from a concussion and that physical rest is needed."

Read carefully. *Well-accepted.* The paper cites unpublished data on children by one of the authors, 2 meta-analyses and 2 consensus opinions. **In other words, no data at all.** Yet somehow the concept has caught on.

First of all, I don't think it's possible for most people to realistically practice cognitive rest. Who knows if there is really any difference in metabolism and energy use by the brain if you are engaging in any of the banned activities above? And let's go to the other extreme: if one lies quietly in bed meditating, shouldn't this be the ultimate cognitive rest? Yet fMRI and PET studies suggest (also limited data) that cerebral flow in specific areas of the brain increases during this state.

Maybe a modest increase in activity is good. Physical activity (within limits) has been shown to be very beneficial to physical and psychological wellbeing time and time again. And the only paper I could find on the topic with respect to TBI showed that randomization to bedrest vs normal physical activity had no difference in post-concussive syndrome incidence or severity. However, the active group recovered with significantly less dizziness.

Bottom line: There is no data to support the concept of cognitive rest. Any type of activity, either mental or physical, can cause fatigue in a variable amount of time in people with mild TBI. It is probably best to interpret this as a signal to take it easy once fatigue occurs and recover for a while before exerting oneself again. But so far there is no objective data to show that cognitive activity either helps or hinders recovery.

References:

1. *Cognitive rest: the often neglected aspect of concussion management. Athletic Therapy Today, March 2010, pg 1-3.*
2. *Effectiveness of bed rest after mild traumatic brain injury: a randomised trial of no versus six days of bed rest. J Neurol Neurosurg Psychiatry 73:167-172, 2002.*



www.TheTraumaPro.com



[@regionstrauma](https://twitter.com/@regionstrauma)



www.Linkedin.com/in/MichaelMcGonigal



[Michael.D.McGonigal](https://www.skype.com/people/Michael.D.McGonigal)

