COMMENTARY

Seriously. Clowns.

Brian Alverson, MD

In this month's *Hospital Pediatrics*, Sanchez et al[1] demonstrate that salivary cortisol levels go down in children who are exposed to humor therapists (translation: clowns) in the inpatient setting. Further, they showed that stress levels, as measured by 2 separate, validated scores, are reduced.

No doubt some readers are looking warily at this article, and ruminating on the seriousness of the material, or their own distaste for clowns in the clinical setting. Or at least some are simply thinking of tossing this article into the circular file.

But I would argue, if you are one of them, you're missing an opportunity to think differently about hospitalized children, and possibly change the way you practice. Please let me explain.

Just the other day, I was on the wards, and an infant was admitted for fever, and yeah, maybe it was a virus, or less likely it was a bacterium, but the nurse called me because there was no order for acetaminophen. So I rolled my eyes, and said something pithy about how when I was a resident I didn't forget to write for the acetaminophen. I just banged out an order with a mental note to tell the resident after noon conference that they forgot the order.

But wait. I asked myself, why am I ordering acetaminophen on this kid?

Are fevers there for a reason? We evolved to spend some serious glucose on fevers. Our cells express viral genomes on MHC-1 complexes and that makes our CD-8–positive T cells blow out interleukin-1 and Toll-like receptor ligands like an elephant on propylene glycol and that interleukin-1 storm heads straight to the midbrain and tells it "make the body 104 degrees, stupid."[2] And then all the muscles start shivering and the temperature goes up, up, up. Why do we do this? Of all times to expend valuable glucose stores, why now?

Well, because, of course, viruses and bacteria have a harder time replicating at 104 degrees.[3,4] And so this is how we prevent further spread of the virus through the body. Fevers are good for you! And, wait, why are we giving a medication with clear evidence for liver toxicity[5] to a patient so we can blunt their effective battle against a pathogen?

Because, well, it will make them feel better.

And this is so interesting, because the next child I rounded on that day was a kiddo with an apparent life-threatening event. Oh, I'm sorry, a brief resolved unexplained event, except it wasn't because I totally knew what was happening. This little infant was sitting there and spitting up all over his shirt. Examining him was like wandering into a Scottish peat-bog. I took off his shirt and wondered if there would be some age-old sheep carcass. And there was this one time yesterday when he spat up and transiently looked like Marty Feldman, so of course his parents brought him in to the emergency department, because that's what you do when that happens. And the emergency department admitted him, and overnight somebody figured that with a shirt containing 4 gallons of regurgitated formula this child probably had reflux.

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So they started him on ranitidine. That way his eyes might recede to their normal location, and yeah, he won't stop spitting up on ranitidine (and do I really care? Because he's 99th percentile for weight), but maybe that'll keep him comfortable. And they wanted him to be comfortable while he spat up his pint of overfeed while uselessly lying in a bed angled at 30 degrees. So they gave him ranitidine, that way he'll make less acid in his stomach.

Do we make acid for a reason? I mean, hey, we're wasting our hard-earned ATP every day, powering that proton pump so we can acidify that stomach. And then, jeez, I'm pretty sure every infant in the world, and most adults, reflux a little bit. Why the heck would we throw out valuable energy on ralphing acid up into our own throats? Who the heck evolves to do that?

Maybe there's a reason. Maybe by spitting up our acid we decrease the colonization of our hypopharynx with pathogenic bacteria. Maybe that's why the kids on ranitidine have a sixfold increase in pneumonia (so do the adults!).[6] Maybe that acid protects us from gastroenteritis, too. But c'mon, what are the chances, we say. We're willing to risk harm, because we want this child to feel good!

So we're willing, every single day, to help a child "feel better." And we do that because we're nice people and we care.

And now we've got some evidence showing that if you make a child laugh they'll feel better too. And they showed it would physiologically make children feel better by collecting saliva in a test-tube and measuring cortisol.

Maybe some will read this, and keep giving acetaminophen, and keep prescribing ranitidine, and keep avoiding the clown walking down the hallway because of physician coulrophobia?

It is so much easier to laugh at this article than it is to get a sick child to laugh at his own illness. And unlike acetaminophen or ranitidine, laughter is not remotely bad for a child. Learn a magic trick. Come up with a few jokes. Bring in the clowns. Let's make work fun again and bring the art back to medicine.

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