

COMMENTARY

America: Dumb to Tempt More Pot-Related CV Complications

Melissa Walton-Shirley, MD | November 13, 2016

As pot slowly infuses the neurons of more cohorts of mostly young and middle-aged Americans, we will predictably see more cardiovascular complications. Today's presentation at the [American Heart Association \(AHA\) 2016 Scientific Sessions](#) by Dr Amitoj Singh (St Luke's University Health System, Bethlehem, PA) described an association between cannabis use and a twofold increase in the diagnosis of takotsubo cardiomyopathy, a diagnosis usually reserved for severely stressed middle-aged females^[1]. The ICD code for "octopus-trap" cardiomyopathy (429.83) and marijuana use (305.2x) are appearing together more commonly at hospital discharge in young men. Apical ballooning produces profound congestive heart failure and an amazingly hypokinetic ventricle, but the mortality rates are usually as low, as the symptoms are severe. It's not completely benign, though. A woman who developed the syndrome died within hours of her husband's funeral as I flew her to a tertiary center out of desperation. Despite the intra-aortic balloon pump working hard to bridge her for urgent transplant consideration, the helicopter turned around, heralding my failed efforts.

Seeing this uptick in apical ballooning in the young (and males to boot) is proof that manipulating the sympathetic and parasympathetic nervous systems is probably *not* a good thing for any age or gender unless those systems are producing pathology. Surely it's predictable that inhaling substances never meant for human consumption doesn't bode well for us, but it's not the first time we've heard of pot's potentially deleterious cardiovascular effects.

The authors of a case study published in the *Korean Circulation Journal* wrote that there are 12 published case reports of acute coronary syndromes in patients ages 17 to 36 temporally related to THC exposure within 1 hour to 5 days^[2]. A case-crossover study published *Circulation* described a 4.8-fold increased risk in MI within the first hour of exposure^[3]. This article was lampooned due to its small sample size, but one must admit, where there is smoke, there can be fire (pun intended). After today's AHA 2016 presentation, I'm concerned we are stoking the furnace for takotsubo cardiomyopathy as well.

So far, we've successfully ignored the deleterious effects of pot smoking to develop legislation that could legalize marijuana in many states, including well-known increases in serum carbon monoxide (and the last time I checked carbon monoxide isn't a good thing). We know THC use produces an increase in heart rate by about 45% as well as an increase in supine blood pressure. We've heard of concerns regarding coronary vasospasm and the deleterious effects on orthostatic blood pressure in those who are affected by unpredictable systemic vasodilatation. Surely a few minutes of pleasure aren't really worth a lifetime of pain, although I admit I can't speak from experience. I've never smoked pot, but I've also never walked across the interstate wearing a blindfold or held my hand over an open flame. I figure those things could ruin my day, but admittedly there are no randomized controlled trials proving it.

My disappointment in the pot movement is not as much with those ill-informed greedy growers who salivate at the thought of short-term profits. It's their more sinister deference by turning a blind eye (or a dulled brain's delayed reaction time, perhaps) to the long-term health consequences their movement is already producing. More pot babies are coming into our nurseries, and that spells lower IQs. More takotsubo males are coming into our emergency departments, and no doubt there will be more millennials who won't find the motivation to look for and hold down a job.

Do we really need to become a dunderheaded nation in the name of recreation and relaxation? Do we really want to take a chance on our hearts ballooning and failing to the point they look like hapless squid traps floating without active function just waiting for something to fall into them? Sure, marijuana is "natural" . . . as natural as dying, appendicitis, and hurricanes. With legislation of marijuana passing in some states, we can look forward to more and more young people with weird cost-draining and life threatening diagnoses such as these.

It's all about access because access means implementation. If I have Hershey's kisses on my coffee table, they will be gone by midweek. But I am probably too lazy to drive to the grocery to buy some (despite the fact that I don't smoke pot). Perhaps my *lack* of pot smoking, though, allows me to process just how egregious an insult this dumb movement is going to be for the CV health of the young and middle-aged of our nation. Unfortunately, today's trial is probably just a small toke of an example of the dime bag's worth of CV illnesses coming to a local teenager near you.

Chancing heart attack and takotsubo cardiomyopathy for any reason is the very definition of dumb.

References

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