

Pseudobulbar Affect (PBA)

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Updated: Nov 9, 2016



Excerpted from "A Social Disability," *Stroke Connection Magazine*, January/February 2010

Pseudobulbar affect (PBA) is a tongue-twister, but that's nothing compared to the way it can twist up a stroke survivor's life.

Here's how Angela Scholten, 42, of Oak Creek, Wis., described this "social disability":

My life is built around PBA and minimizing reactions. It is very isolating because I have to gauge every situation: Will it elicit reactions and will they occur in a place or among people that will cause discomfort for me? Like at funerals, I will try not to react: Distract myself; avert my gaze; close my eyes. But at some point, PBA will win, and I will start laughing. There will be tears, also, but laughter is the problem. It would disrupt a solemn event. I would look crazy or disrespectful. The severity of reaction would be exacerbated by the "trigger" factors stacked on top of each other: It's a funeral; other people will be sad or crying; people will be expressing emotions; it's in a church; it involves prayers and Bible readings; how close was I to the deceased; how much energy and focus do I have right now — the list goes on and on. The more exacerbating factors, the more severe and uncontrollable the reaction, and the more distance and separation from the event it would take to stop the reaction. All these things go into deciding if I will do something or not. The upside is that after 17 years of dealing with PBA, this assessment takes roughly 1.5 seconds.

Pseudobulbar affect is the latest name for a neurological condition previously referred to as emotional lability, reflex crying and involuntary emotional expression disorder, among other names. **Someone with PBA has involuntary bouts of crying, laughter or episodic anger.** The outburst may be out of proportion, e.g., a sad stimulus might cause an exaggerated weeping response instead of a sigh. It can appear as mood incongruent, so the person may laugh when they hear sad news. Or there may be rapid switching between laughing and crying. **The affects are uncontrollable and can occur without any type of emotional trigger.** PBA occurs secondary to a neurological disease such as stroke, ALS, Parkinson's, traumatic brain injury, multiple sclerosis, dementia, Wilson's disease or brain tumors.

"There are three common features with PBA," says Dr. Kelly Kearns, clinical neuro-psychologist at Kessler Institute for Rehabilitation in New Jersey. **They are involuntary. They're brief — seconds to minutes in duration.** And they're stereotyped, which means they have a similar appearance across disorders and within patients."

The frontal lobe of our brain normally keeps our emotions under control. The cerebellum and brain stem are where our reflexes are mediated. In PBA there is a disconnect between the frontal lobe of the brain and the cerebellum and brain stem.

“There’s a circuit that connects the frontal cortex with the cerebellum and brain stem so damage in any of those areas or in the circuitry can result in PBA,” Dr. Kearns said. ‘Bulbar’ refers to the brain stem but the injury isn’t always there.

Survivor Pat Quinn, 58, of Coeur d’Alene, Idaho, has had PBA since his second stroke in September 2008. “It manifests as laughing or crying, or it can switch randomly between the two from moment to moment,” he said. “It doesn’t seem to have a trigger. If I’m tired or don’t sleep well, it can hit harder, but it doesn’t hit every time under those conditions. It’s like a light switch with an intermittent short, turning on and off irregularly, regardless of my mood or circumstances.”

In the past, PBA has been treated with anti-depressants, either tricyclids or selective serotonin reuptake inhibitors (SSRI) like fluoxetine and paroxetine. Dr. Kearns noted that anti-depressants are only moderately successful, with SSRIs more effective than tricyclids. Pat Quinn used Wellbutrin™ (bupropion) with some success. “It didn’t stop PBA from happening but it assisted me in establishing control,” he said. “The best part was that it had no side effects like other drugs.” Working with his doctor, Pat reduced his dosage from 300 mg to 100 mg. and then stopped taking it completely in August 2010 because he was at a low dose and felt that he had the outbursts under control.

In January 2011, the FDA approved a new drug called Nuedexta™ (dextromethorphan quinidine) specifically for PBA. In clinical trials, it proved effective against placebo, but it has not been compared directly to antidepressants. Analyzing data across studies, it appears to be faster acting than the anti-depressants with few side effects.

Angela Scholten has used several medications for PBA. She reports that anti-depressants were effective for a while, then each would stop working. She began following the development of Nuedexta™ several years ago before it went into trials. After it was approved, she got a prescription.

“Of all the pills I’ve taken over the years for an assortment of conditions, I can honestly say this pill changed my life in three days,” Angela said. “A giant hand reached into my mind and sought out the dark layer. The thick, condensed, compressed, evil, dark goo of PBA residue was gone in one fell swoop. It was the most amazing thing I have ever experienced.

“My whole mind, my whole life, took a major jump out of a depression I wasn’t attributing to PBA,” Angela continued. “I was brought back a dozen steps from the brink of an almost incapacitating level of depression. Now I have a feeling of control, a feeling so normal that in no time, I felt like the control never left, even though the control had been gone for 17 years. The laughter still breaks through at times [even on medication, why did it not in me for 5 months straight in court while I was breaking into laughter or profanity every 3-4 months inside of the home especially when I was not on any medication]., in the right conditions, but even then the feeling of control is still there. I can truly treat the laughter as a side note, a fluke. I can forget it and move on.”

Important Information about Nuedexta™

Nuedexta™ is not recommended for patients with certain arrhythmias: prolonged Q-T interval, complete heart block,

history of torsades de point (a type of ventricular tachycardia) or heart failure.

As with any new drug, there is a considerable cost difference when compared to older, off-patent medications. Nuedexta™ is manufactured by Avanir Pharmaceuticals and costs \$200–300 for a month's supply. The SSRIs mentioned in the article are \$10–\$12/month. Though off-patent antidepressants are often used in treating PBA, Nuedexta™ is the only prescription drug currently indicated specifically for PBA by the FDA. Avanir, like many pharmaceutical companies, does have a Patient Assistance Program.

Full disclosure: Avanir Pharmaceuticals has been a previous advertiser in Stroke Connection.