

# Right Brain: Humor completes the neurologic examination

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Most of us tend to remember moments that define the major decisions in our lives, the events that make indelible impressions in our minds. In the monotony of our daily existence, remembering these moments helps give us perspective. It helps remind us why we do what we do. When I think back on the pivotal moments that pushed me to become a neurologist, I always remember a face—a smiling face of a young girl.

I was an internal medicine resident in the second year of my training in India. It was a day like any other: patients to see, procedures to complete, and notes to write. Everything was going as planned until I met her. She was a shy girl of 17. She had been sent in from the outpatient clinic to be admitted for evaluation of pyrexia of unknown origin (PUO). The intern and I began the usual process of evaluation—beginning with a history and physical examination. In my head were echoing the words of my department chair: “PUO needs a very thorough history and exam.” Determined to do a good job, I began the laborious process. She told us that she had been febrile for about 3 weeks. Besides this, we could elicit no other complaints. She answered in the negative to our massive inventory of questions. Then followed a physical examination, beginning literally with the head and ending at the toes. I thought I heard a faint murmur when I was listening to her heart sounds; however, in the noise of a busy medical ward, it was hard to be sure. I asked the intern to check and then another resident. Neither was sure they heard it. I decided to continue with the rest of the examination. Having always been fond of the brain, I did a full neurologic examination, including a fundus examination. At the end of this we had still not found anything abnormal.

Her initial laboratory tests had been unremarkable and we were stumped. It was then that it happened. My intern cracked a joke. I do not recall the details now, but I guess it must have been funny because it elicited a smile from the patient. It was a peculiar smile—because it most definitely was lopsided. Having seen this, I proceeded to repeat the cranial nerve

examination. I asked her to grin and to show her teeth, both of which she did perfectly well. I was puzzled. I was sure there had been asymmetry in her smile just a few seconds ago. Observing her a little longer, I noticed it again: when she smiled spontaneously, one side of her mouth did not move as well as the other. We questioned her relatives and they confirmed that this was not something they had ever noticed before. It was still a puzzle to me: she could grin symmetrically when I asked her to, but when she smiled spontaneously, she had weakness of one side of her face. A trip to the library revealed that I was dealing with an emotional facial paralysis.<sup>1</sup> From my reading, I learned that the pathways controlling voluntary and emotional facial movements were separate.<sup>2</sup> The pathway controlling emotional facial movements began in the supplementary motor area or the cingulate cortex and via the anterior portion of the internal capsule and thalamus ultimately reached the facial nucleus in the pons.<sup>3</sup>

Armed with this new knowledge, I proceeded to order an MRI of the brain. An MRI was something that could not be ordered lightly in a resource-poor setting like India. The MRI confirmed that she had a thalamic stroke, which had in the literature been described as causing emotional facial paralysis.<sup>4</sup> We then proceeded to do an echocardiogram and established the diagnosis of subacute bacterial endocarditis. She was treated and recovered well.

That day I added a new tool to my neurologic bag of tricks—a sense of humor. From that day forward, I do not consider a neurologic examination complete until I make the patient smile.

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## DISCLOSURE

Pavan Bhargava reports no disclosures. Go to [Neurology.org](http://Neurology.org) for full disclosures.

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