

Brain Cutting

Category: Stories

written by Emma Samelson-Jones | April 3, 2009

Emma Samelson-Jones

The pager came to my resident, who grinned and looked over at me, his hovering medical student. "You should go to this."

I looked down at the pager.

"Brain Cutting. 2:30 PM. Room B157."

Text pagers are the indifferent bearers of all news. Emergencies—"Smith, BP 60/30, Room L721"—appear in the same font as messages seemingly borrowed from a teenager's cell phone: "OMG, the harpist in the hospital lobby is playing 'My heart will go on' from Titanic. WTF?"

I dutifully took the elevator down to the hospital basement and opened the door to the morgue. The medical examiner and a group of neurology residents and students were gathered around a steel table, its sides sloping gently down to a central drain.

As more people arrived, the residents repeated the patient's history. Adrenoleukodystrophy—a rare genetic defect, marked by progressive brain damage. Same disease as in that movie *Lorenzo's Oil*. A freak traffic accident involving a train had been followed by worsening weakness. Unsteady gait. Seizures. Personality changes. Death.

Most of the residents had cared for this patient over the previous year. We flipped through a pathology book with autopsy photos of another adrenoleukodystrophy case, then reviewed the brain MRIs that documented our patient's progressive loss of white matter, the myelin sheath insulating the nerves.

"Fascinating," said one student. "Has a case like this one ever been reported in the literature?"

Nobody had seen one; there were plans to write it up.

The medical examiner, a pathologist with long, blond hair pulled back tightly in a low ponytail, reached into a vat of formalin preservative and pulled out a human brain, the spinal cord still attached. She set it on the gleaming table.

Gleeful. The word kept repeating itself in my head as the enthusiasm in the room mounted.

I expected the medical examiner to open a large set of dissection tools to examine the minutiae of this man's brain. Instead, she took out only two instruments: a large, nondescript knife with a ten-inch blade and an

industrial-strength metal spatula like those used to flip burgers in restaurants. With clean, confident strokes, she cut half-inch sections, starting at the end of the spinal cord and going all the way up through the brain. After each cut, she scooped up the section with the spatula and lined it up next to the others on the table. Within five minutes, the brain looked like the pictures in the pathology book.

Almost two-and-a-half millennia ago, Hippocrates wrote:

Men ought to know that from nothing else but the brain come joys, delights, laughter and sports, and sorrows, griefs, despondency, and lamentations. And by this, in an especial manner, we acquire wisdom and knowledge, and see and hear and know what are foul and what are fair, what are bad and what are good, what are sweet, and what are unsavory...And by the same organ we become mad and delirious, and fears and terrors assail us.¹

Now this essential organ of humanity—the matter underlying the mind, the seat of the soul—was displayed in half-inch sections for us to see.

We took turns feeling how soft the cerebellum's white matter was compared with the rest of the brain.

"Amazing."

"Wow!"

I touched the soft, mushy white matter, thinking about the man, who was apparently funny and kind and unreliable.

The medical examiner, thrilled to have a rapt audience, took the opportunity to teach us how to determine the cause of death for death certificates. Which had killed the patient—the train that had hit him many months earlier, or his disease?

She divided the brain sections into groups: a few sections of the occipital lobe, from the rearmost part of the brain, for a researcher on the East Coast; some spinal-cord sections for a lab in California; the remainder for the local pathology department.

Later, I thought about the relationship between the patient—the man, now dead—and the case, which had lived on in the autopsy specimens and in the glee that had permeated the morgue during the brain cutting.

Is the case a lasting memorial to the deceased? Consider the famous amnesiac HM, whose short-term memory was obliterated by brain surgery. He died last year, but his case lives on in neurology textbooks. Or are the patient and the case two completely separate entities—the case born of the patient as Athena was born of Zeus—once united but ultimately independent, to be examined, discussed and dissected in isolation from one another?

During that hour, as we gleefully dissected the brain of a well-known patient, the case and the patient were separate entities. Perhaps that reflected the ultimate triumph of rationality, of the cortex—the seat of thought and consciousness—over the more emotional limbic system.

Achieving this total disconnect is necessary in some of the work that physicians do. But is a human toll suffered—not by patients such as this man, whose brain was so fascinating that we sent pieces of it to labs across the country, but by the physicians, whose own brain functions become so compartmentalized that they feel no empathic response?

¹Hippocrates. *On the Sacred Disease*. As cited in *Origins of Neuroscience: A History of Explorations into Brain Function* by Stanley Finger, 13. New York: Oxford University Press, 2001.

About the author:

Emma Samelson-Jones is a fourth-year medical student at the University of California, San Francisco, where she is completing an area of concentration in the humanities. She will begin a psychiatry residency at Columbia University this summer. “I went to medical school because I wanted to ‘be of use’ and because I was interested in people’s stories. Physicians have incredible access to the lives of individuals, which is what keeps me excited about coming back to the hospital. Nonfiction writing is a way for me to sort out my own ideas and to share them with a wider audience.”

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