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Curing Facial Agony With Microscope and Mallet

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BODY:

Working in a Very Small Place
By Mark L. Shelton
315 pages. W. W. Norton & Company.
$19.95.

Facial pain is what Mark L. Shelton's absorbing work of medical reporting begins with - facial pain so excruciating that its sufferers sometimes consider suicide. The condition is known is trigeminal neuralgia -formerly tic douloureux, or painful tic - and for years it was treated, unsatisfactorily, by medication or by killing the trigeminal nerve.

Then in 1966, a neurosurgeon at the University of California at Los Angeles named Peter J. Jannetta made a series of serendipitous discoveries. They involved the cranial nerves inside the so-called cerebellopontine angle, "a very small place on the underside of the brain," as Mr. Shelton puts it in "**Working in a Very Small Place,**" subtitled "The Making of a Neurosurgeon."

To oversimplify grossly: Dr. Jannetta learned that by boring into the back of the skull of a trigeminal neuralgia victim and gently moving aside the part of the brain known as the cerebellum, he would almost invariably find under microscopic examination that an artery (or occasionally a vein) would be pressing against the fifth cranial, or trigeminal, nerve.

By locating the offending blood vessel and either cutting it, if it was a vein, or, if an artery, placing between it and the nerve a tiny Teflon pad to relieve the pressure, Dr. Jannetta could eliminate the sufferer's facial pain. Similar procedures involving other cranial nerves enabled Dr. Jannetta to cure such conditions as facial twitching, vertigo, hypertension and spasmodic torticollis, a disorder characterized by involuntary movements of the neck muscles.

In his book's most dramatic passages, Mr. Shelton, a science writer and magazine editor,

describes in detail the brain operations that Dr. Jannetta performs on a typical day in his present role as chief of neurosurgery at Presbyterian-University Hospital in Pittsburgh. We visualize the surgeon scraping away at fibrous skull covering with a periosteal elevator, a chisel-like instrument that is, "with the possible exception of the mallet," the most unneurosurgical-looking of tools.

We hold our breath as, during the most ticklish stage of a procedure, one patient moves and begins to wake up. We listen to Dr. Jannetta alternately humming and cursing, unconscious behavior he would have denied had he not been confronted with the evidence of it on a taped recording. We come to understand Dr. Jannetta's deep belief in his discovery of microvascular decompression, particularly when, with the lifting away of an offending blood vessel from a troubled nerve, the patient's symptom, as represented on an oscilloscope, suddenly disappears.

As Mr. Shelton follows his subject through these and other moments in a brain surgeon's daily routine, he digresses into their implications, both weighty and trivial. The surgical procedures themselves lead to a discussion of the enormous controversy that Dr. Jannetta's innovations have generated, with opposition so rigid that its overturning has produced a revolution in neurosurgery.

As Mr. Shelton explains it, Dr. Jannetta's theory was too simple, and "unhappily for him," it was "tailor-made to upset his profession." Part of the upset "had to do with Jannetta's age and rank; part had to do with the profession's relationship to new ideas; and, finally, part had to do with Jannetta's own unawareness of these things." Although it sounds naive, "he really just wanted to practice surgery, and he thought he had a good idea." But his elders did not appreciate a brash young man telling them how to change their ways. And it has only been by painstakingly teaching his techniques to a widening circle of his fellows that Dr. Jannetta has been able to change the face of neurosurgery.

Through accounts of less momentous events in a typical week, Mr. Shelton tries to reveal the character of neurosurgeons, of which he writes in one passage: "It is evocative to consider that perhaps neurosurgeons and their infamous 'personalities' are made in the operating room, where absolute autocracy is one's best hedge against someone else screwing up your patient. As polite or surly as a neurosurgeon may be, he knows above all else that he couldn't be doing what he is doing if he didn't know exactly what the hell he was doing, and letting anything impinge on that is a sure way of giving someone or something the opportunity to mess up an operation."

A Saturday afternoon softball game, pitting the hospital's attending physicians against the residents, gives the author a chance to show his subject's lighter side. "It'll only take a second," a resident yells sarcastically at a pitcher whom the chief has just replaced with himself, "and then next time you can do it all start to finish." Even on the playing field, Dr. Jannetta likes to take control.

At its best, "**Working in a Very Small Place**" is fascinating to the point of being scary. At its more mundane, it wanders off in too many not so exciting directions. Yet its

greatest value lies in its making the frightening seem acceptable. One may at first blanch at the idea of someone's invading the human brain with surgical chisels and electronic probes. But after reading Mr. Shelton, one understands that doing so involves merely a series of routine and well-practiced steps. During which one prominent practitioner sings to himself, "Lazy bones, sleeping in the sun, how you gonna get your day's work done. . . ."

GRAPHIC: Photo of Mark L. Shelton