Commentaries

Localizing the Wandering Uterus

Conversion disorders have been recog-nized forever although not formally studied until the great French neurologist, Charcot, focused his attention on this problem in the mid 19th century. The patients were predominantly women, perhaps all women, who manifested a variety of clinical signs that could not be explained by any known derangements of neurological structures. Freud, who studied with Charcot, developed an interest in this area, later publishing the famous case of conversion-weakness in Anna O. Anna O, of course, was cured by psychoanalysis and then went on to a prominent career as a social worker.

The term "conversion disorder," which has been used interchangeably with "hysteria," refers to the presumed mechanism by which non-organically explicable neurological abnormalities result when emotional distress is allegedly "converted" into physical manifestations. The term "hysteria," which predated Charcot, is derived from the Greek term for uterus. It was used to describe these disorders because they were thought to occur only in women, and were ascribed to a problem with the uterus, which was thought to wander.

Conversion symptoms are so common that they are discussed in the vernacular in such phrases as, "so-and-so is a pain in the neck," (or some other place). What this phrase means, of course, is that "so and so" causes so much aggravation that one experiences his presence as physically painful. It is common to blame headaches, for example, on stress at work, difficulty with relatives, etc. It is unlikely that anyone doubts that stress may cause pain in vulnerable people. Yet the notion that stress may cause weakness, numbness, blindness, muteness, tremors, impaired walking, or seizures, is accepted more in the general sense than in a specific case. "Yes, I think that stress may cause these problems in some people, but not in me."

A few decades ago, before the era of modern imaging and invasive testing, several studies reviewed the long-term outcome of patients who had been diagnosed with psychogenic explanations for their symptoms and signs. A large percentage, varying from 30-50%, ultimately *were* explained as the result of organic lesions. Neurological patients were found to have MS or unusual, but clearly organic, forms of epilepsy. Inflammatory bowel disease explained many with non-specific GI symptoms. Systemic lupus erythematosis and other autoimmune disorders became apparent. Metabolic derangements became identifiable, and these, in retrospect, explained the earlier symptoms. This undermined everyone's confidence in their diagnoses, particularly psychiatrists who were put in the difficult position of trying to "cure" someone of a presumed psychogenic disorder that later turned out to be multiple sclerosis or a brain tumor. However, in recent times, similar studies have revealed an amazingly low incidence of mis-diagnoses. The vast majority of current diagnoses of non-organic disorders are, it seems, correct. The problem thus moves from, "is it organic?" to "how did this happen?" and "what to do about it?" The answers are, unfortunately, not known. Psychoanalysis has been more helpful in explaining than in treating it.

As a movement-disorders specialist, I know most about conversion disorders in this area. The diagnosis of psychogenic disorder is made in about 5% of new patients referred to movement-disorder centers in the western world. This is a fairly substantial number and certainly underestimates the problem because many of the disorders are transient and resolve before the appointment to the specialist's office. My experience doing general neurology consults in hospitals suggests a percentage quite a bit greater than 5%. It is not terribly uncommon to give tPA, for example, to patients who were thought to have had strokes, but actually had psychogenic weakness. I've seen one patient who has had tPA twice for psychogenic "strokes."

The natural history of conversion disorders in general is interesting. The vast majority resolve without treatment in the first few weeks, while those that persist for several months generally persist forever. These are often disabling, and no treatment is known to be effective. The patients generally do poorly. The neurologist dismisses them with, "no neurological disorder" and then the psychiatrist dismisses them with "no psychiatric disorder." It is only in recent years that some neurologists have at least continued to follow these patients, even if the etiology of the disorder is psychiatric, just as we follow people with untreatable degenerative disorders. This is support and is important, but it is not treatment, at least not specific treatment.

While many of these patients share a variety of common psychiatric comorbidities, such as childhood abuse, personality disorders, post traumatic stress disorders, not all do, and many, on the surface, appear to not have much in the way of psychiatric dysfunction. This, of course, makes life hard for the psychiatrist and, worse for the poor patient.

In recent years, there have been studies trying to figure out "how" rather than "why" conversion disorders take place, by using fMRI, a crude measure of brain activity, while the patient has conversion symptoms, and comparing the results to normal controls feigning the same disorder. In one study however, the conversion patients had intermittent tremors and the fMRI were obtained while the patient had the conversion tremor and then again when the same patient voluntarily mimicked the tremor, thus acting as his own control. The fMRI patterns differed when the conversion disorder patients had their conversion-tremor, presumably voluntary but unconscious, from when they feigned the exact same tremor. This implies that there are physiological underpinnings to explain how some patients develop neurological symptoms which are generated unconsciously. These physiological alterations will not explain why some patients develop these problems but may, in time, suggest how to treat them. It is not clear in this early stage whether this imaging modality will allow us even to diagnose the problem.

These studies are important because conversion disorders are common, confounding to all involved and may provide insights into the dynamics of unconscious motivations. The different conversion symptoms have been associated with different brain alterations. No single region has been implicated to suggest that there is a region devoted to "self-awareness." The data thus provides a philosophical

conundrum. How can an unconscious disorder be "non-organic?"

– Joseph H. Friedman, MD

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Conflicts: In addition to the potential conflicts posed by my ties to industry that are listed, during the years 2001-2009 I was a paid consultant for: Eli Lilly, Bristol Myers Squibb, Janssen, Ovation, Pfizer, makers of each of the atypicals in use or being tested.

A Terrible Spirit Hath Taken Him

How do we establish the identity, the individuality, of a specific systemic disease? We gather its outward manifestations such as fever, weakness, rash or pain, then solemnly declare its separateness from other known diseases. Finally we confer a name upon it. Human progress, though, is glacially slow, measured more in millennia than in years; and of humanity's many worthy disciplines, none has progressed more slowly than rational medicine.

Consider our understanding of a family of illnesses called epilepsy. The signs that announce epilepsy emerge dramatically, are often sharply defined and so distinguishable from other systemic disorders as to separate epilepsy from the banal family of known diseases. Indeed, few diseases arise so abruptly and speak so audaciously. A fever, even a devastating fever, can be the sign of countless disorders, but a convulsion culminating with the loss of consciousness – a falling down – can only herald something perilously different.

And so, in the eyes of both ancient physicians and equally ancient non-medical observers, epilepsy - the Falling Sickness - was set apart and considered beyond the domain of conventional medicine since it was obviously a manifestation of spirit-possession.

The Bible tells this plaintive story: "And behold, a man of the company cried out, saying, Master, I beseech thee, look upon my son: for he is mine only child. And lo, a spirit taketh him, and he suddenly crieth out; and it teareth him that he foameth again, and bruising him hardly departeth from him. And I besought thy disciples to cast him out; and they could not." (Luke 9: 38 – 40.)

Seeing a child – or a young adult – suddenly and without visible provocation become transformed, consumed by convulsions, incontinent, crying in incomprehensible words as though talking in an alien language, bereft of consciousness – or sometimes transfigured to a state of exalted consciousness – this surely cannot be some mundane disorder much like a rheumatism or a belly ache. And by its impetuous appearance, it must certainly be an abrupt invasion from without.

By common consent, and common sense, epilepsy was defined as a problem to be confronted only by those skilled in challenging exotic spirits or demons and adept in their expulsion.

Spirit possession was the prevailing causation of epilepsy through the 19th Century. Romans, demonstrating an even-handed attitude, called the disease either *morbus sacer* (the sacred disease), *morbus demoniacus* (the demonic disease) or *morbus comitialus* (the public place disease) Yet even four centuries before Roman ascendancy, Hippocrates (c.460 - 370 BCE) denied an extracorporeal origin of epilepsy declaring, "Neither truly do I count it a worthy opinion to hold that the body of man is polluted by God, the most impure by the most holy." Epilepsy, he concluded, is no different that other diseases.

A final comment by Hippocrates: He declared that epilepsy can be cured ". . . without minding purifications, spells and all other illiberal practices of a like kind." Galen, some five centuries later, agreed that epilepsy was surely in the realm of the secular, treatable diseases, although he incorrectly ascribed epilepsy to his theory of humors.

Yet these classical voices of antiquity, while heard, were not heeded. The satanic origin of epilepsy was an unqualified axiom for another millennium. (See, for example, the Salem witch trials of 1692.)

John of Gaddesden (1280 – 1361), court physician to King Edward I and England's most prominent physician of his age, described how to distinguish satanic possession from mundane epilepsy: "Utter these words into the ear of the suspect: 'Depart demon and go forth.' If he be lunatic or demoniac he immediately becomes dead for nearly an hour. If he does not fall when he hears this word, then you know he is epileptic."

Demons were still alive and thriving as etiologic agents in the late 17th Century. Thomas Willis (1621 – 1675), with neither irony nor tongue in cheek, declared: "As often as the Devil is permitted to afflict Miserable Mortals with his delusions, he is not able to draw more cruel arrows . . . than by the assaults of this Monstrous Disease."

And to prove the ubiquity of the Devil even in artless, guileless children, the great Dutch physician Gerhard van Swieten (1700 – 1772) wrote: "I have seen an innocent boy of four years of age, who, as soon as he began to repeat the Lord's prayer, was immediately convulsed." A credulous younger van Swieten was certain of the tangible reality of demonic possession. But latter in life, as court physician to Empress Maria Theresa, he decried this superstition that had infiltrated medicine; and it was Swieten who later denounced the beliefs, widespread in Austro-Hungary, in vampirism and other demonic persuasions.

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