The History of the Disease of "Stigmata" and a Reflection on How History Can Create Biases that Negatively Affect Medical Management

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Introduction:

History has the power to shape ideals within the culture of present day society. However, this does not always produce a positive outcome and unfortunately can lead to the creation of stereotypes and stigmatisms. The following is not only a true story, but a review of how history impacts current medical culture and treatment.

Stress can manifest as many different physical symptoms in the human body. One might get a fast heart rate, sweat under the arms, or develop a headache; but stress can also manifest in more peculiar ways. In the rare few, stress can cause profuse bleeding from the eyes, hands, forehead, palms, and soles. The medical term is hematidrosis, but it is known in popular culture as stigmata. Hematidrosis is a well-documented medical disease and, while there is no confirmed cause, a few theories have been proposed, such as rupture of the capillaries near the sweat glands, dermal defects leading to blood filled spaces that empty in the hair follicles, or a vasculitis.\(^1\) Naturally the sudden onset of this medical phenomenon would be terrifying to the everyday person, but imagine the horror of a teenage girl developing this abruptly while in her last year of middle school.

The bleeding episodes of hematidrosis plagued this girl at least seven times a day and greatly affected her quality of life. She was shunned at school and in public. Her mother and the patient sought help from the medical community and went to multiple medical providers. Specialists accused the patient and her mother of faking the disease and specifically accused the mother of Munchausen’s by proxy. She was admitted overnight to a hospital where a chaplain threw holy water on her in an attempt of a cure. After nine months in and out of clinics and hospitals the appropriate and well-documented treatment of propranolol was initiated with succession of symptoms.\(^2\)

When reflecting on this case a few important questions come to mind: What about her disease presentation prevented proper and timely care? Can the medical providers’ reactions be traced to the view of this disease in a historical context? And most importantly, were medical workers influenced by a historical or religious bias? The following is a review of the history of the disease of hematidrosis and how history influences these biases in medicine.

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Hematidrosis Documented in History:

The symptoms and causes of hematidrosis are well documented throughout the historical literature. Hematidrosis is even mentioned by Galen, one of the “fathers of medicine,” who states “it happens that by a great and heated movement of the spirit the pore become so dilated that blood flows through them, and thus there is effected a bloody sweat.”³ It is stated often in the literature that emotional and mental stress induces hematidrosis.⁴

Intense fear seems to be a common theme when analyzing early historical texts, especially when a person is facing imminent torture or death. The French historian Jacques Auguste De Thou who lived during the late 16th century describes, on multiple occasions, the condemned sweating or crying blood when faced with the prospect of death. De Thou retells an account of an Italian officer in 1552 that when “threatened by public execution unless he surrendered […] was so agitated at the prospect of an ignominious death, that he sweated blood from every part of his body.”⁵ In another example, De Thou describes a young man who was condemned to death by Pope Sixtus V who was observed to “shed bloody tears, and to discharge blood instead of sweat from his whole body.” Due to the hematidrosis in this specific case, the phenomenon was taken as evidence to many onlookers that this young man’s sentence was too cruel and hastily given. The crowd proceeded to take vengeance on the magistrate and found him guilty of murder.⁶ In another account, the German historian Rosinus Lentilius, during the early 18th century, tells the tale of a young boy that sweat blood when witnessing his brother’s gruesome execution.⁷

While most of the historical tales focus on symptoms brought about by the execution of men, women are actually known to experience hematidrosis at a higher rate. When described in more recent historical literature, hematidrosis is usually attributed to the antiquated thought of the “hysteria” of women. Historian Dr. JH Pooley in 1885 states “it is most common in females, and especially in nervous and hysterical women and produced by overwhelming mental emotions, and marks the acme of such perturbing passions as terror, anguish, despair etc.”⁸ This description of the

hysterical women can further be observed in the October 1845 edition of the *Medico-Chirurgical Review Journal*; when describing hematidrosis in a few women in a nunnery in Italy the author states “it is worthy of remark that they were all subject to violent convulsive attacks, and were evidently laboring, at the same time under the influence of intense mental excitement [...] their malady was doubtless one of the most distressing forms of Hysterical disease.” In another edition of the *Medico-Chirurgical Review Journal* from 1831, the author describes a women with irregular menstruation who had the “most remarkable phenomenon [that] was an exudation of blood from the cheeks in the form of perspiration [...] this bloody perspiration took place whenever the hysteric paroxysm lasted a considerable time.” Whether it be the stress from “hysteria” or the stress of facing one’s own death, hematidrosis is clearly documented in history to be brought about by emotional stress.

**Hematidrosis Documented in Religion:**

It was the Christian culture that popularized the term of stigmata, which originates from the Greek term to mark, to describe the manifestation of marks on the hands, forehead, and feet that resemble the wounds of Jesus Christ. It’s been theorized that Jesus Christ sweat blood prior to being crucified. The Rhemish testament, which is a 1582 Romish version of the New Testament, describes before his execution that Jesus’ “sweat became as drops of blood trickling down upon the ground.” Dr. William Edward wrote in the well-respected *JAMA* medical journal, when medically analyzing the death of Jesus, “at nearby Gethsemane, Jesus, apparently knowing that the time of his death was near, suffered great mental anguish, and, as described by the physician Luke, his sweat became like blood [which] supports the diagnosis of hematidrosis.” However there has been some controversy from religious scholars whether this is actually large sweat drops that is similar to blood and not actual blood. The possibility of documented hematidrosis in the religious text has, not surprisingly, spurred imitation in followers.

**Claims of Stigmata in History:**

The first recorded episode of Stigmata in Catholic Christian literature was St. Francis of Assisi in 1224. After traveling up a local mountain and fasting for 40 days and 40 nights he claimed

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9 Stroud, “Instances of Sanguineous Perspiration,” 453-471.
10 Ibid., 453-471.
12 Ibid., 1455-1463.
to see a vision of Christ and then received the “marks of Stigmata.”
While there was man from Oxford that claimed to have stigmata two years prior to St. Francis of Assisi, he was determined to be an imposter and arrested. St. Francis of Assisi is still considered the first real claim of stigmata and inspired many to voluntarily follow suit.

Skepticism has followed the claims of stigmata through history and its true existence has been debated. Dr. Pooley reviewed a religious publication and noted that the subjects of the stigmata cases “were all those of poor peasant-girls, in secluded, out of the way hamlets, among a rustic and ignorant population; they were plainly hysterical and catalectic, visited by hundreds of wondering, half-adoring spectators, who were ready to fall down and worship them.” He further states that “we have here everything that could stimulate and aid deception, and nothing at all of the ‘clear light of scientific investigation.’”

Through the years, many religious stigmatics have been exposed as hoaxes and there are many published papers disputing their claims and linking the disease to self-mutilation and psychiatric disorders. Two important examples of stigmatics in history that were found to be faking their symptoms were Magdalena de la Cruz and St. Padre Pio. In the early 1500’s the nun Magdalena de al Cruz was honored as a living saint in Spain for her claims of stigmata, but confessed it was false on what she thought was her death bed. Unfortunately, she survived and was sentenced by the inquisition for her trickery and imprisoned for the rest of her days in her convent. St. Padre Pio is a more recent Stigmatic who recently passed away in 1968. It is suggested that he used carbolic acid to cause the wounds on his hands, which recently made headlines after being exposed in a recent book by Professor Sergio Luzzatto of Italy after he found a letter from a pharmacist who sold the monk carbolic acid. These fake cases no doubt shaped the views and formed the biases that caused the delay in appropriate medical attention in this present-day patient.

Impact of Bias in Medicine:

Bias in medicine is an ongoing problem in the medical community that is well documented to cause lower quality of care. In a systematic review, Saposnik et al determined that prior information, attribution, and availability bias were among the cognitive biases that “are associated with diagnostic

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15 Ibid.
17 Nickell, Real-Life X-Files.
inaccuracies or suboptimal care.” Attribution bias is a type of stereotyping by basing the diagnosis on disposition or character while not finding a true medical explanation. The association of hematidrosis with religion or with past hoaxers caused similar bias in the medical providers and prevented diagnosing a real medical condition and timely treatment. At multiple specialists’ offices, the patient and mother were accused of lying about the disease and faking the symptoms caused by an information bias since there was a lack of knowledge about the disease.

History is no stranger in creating medical stereotypes. Bias and discrimination is not only seen in the patients with the disease of hematidrosis, but has affected many commonly encountered diseases. The best example in modern history is the disease of HIV that has been shrouded in myths and misinformation since it’s discovery. Around the world patients with HIV are barred from accessing proper medical care and are shunned by their community. The Executive Director of UNAIDS, Michael Sidibe states “whenever AIDS has won, stigma, shame, distrust, discrimination and apathy was on its side. Every time AIDS has been defeated, it has been because of trust, openness, dialogue between individuals and communities, family support, human solidarity, and the human perseverance to find new paths and solutions.” This statement could easily be used to also describe the disease of Hematidrosis. The medical community has much to learn from the history of medicine and understand the biases that impact proper treatment and medical care.

Conclusion:

The medical field needs to confront its history and reflect internally where biases and stereotypes originate from. The history of the disease of “stigmata” provides an interesting example of the impact of history on the way people view a disease and how this view can ultimately affect timely treatment. While the original patient was eventually treated, the delay and mistrust of the medical community caused significant mental and emotional stress by both her and her mother. Due to historical views of stigmata, health care providers participated in inappropriate behavior such as dousing the patient with holy water in a hospital and coming to the immediate conclusion that she was faking the disease without proper testing. With the amount of historical evidence about this disease, it is surprising that medical providers discount patients and fall into the traps of their own

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biases. The historic examples of fake stigmata in popular culture or the unfortunate unconscious views of “hysteria” in women also likely play a role in this delay of treatment.

A couple important questions come to mind when reflecting on this case such as: How do we as a medical profession fix these biases? Is more education needed to prevent a case like this from happening again?

History has created biases in medicine and they are hard to overcome, but with healthcare provider reflection and recognition of the history that is shaping beliefs it is possible. This will hopefully be the case for hematidrosis with better recognition and understanding of the history behind the disease. The history of medicine is meant to be learned from and we should embrace its teachings to better care for our patients who depend on us.