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# Journal of Anesthesia History

journal homepage: http://www.anesthesiahistoryjournal.org



### Original Research

# An Appraisal of the Life of Charles Thomas Jackson as Attention Deficit Hyperactivity Disorder ★,★★,★★

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#### ARTICLE INFO

#### Article history: Received 22 November 2014 Received in revised form 12 February 2015 Accepted 29 April 2015

#### ABSTRACT

Charles Thomas Jackson claimed to have original ideas that led to the creation of guncotton, the electromagnetic telegraph, and the use of ether as an anesthetic. There was, though, a gap between when the idea was enunciated and when it became reality, with other individuals accomplishing the latter. An examination of Charles Jackson's life reveals a pattern of behavior that is compatible with attention deficit hyperactivity disorder with an associated diagnosis of oppositional defiant disorder. These diagnoses are explored in the context of Jackson's life to explain why he did not carry his initial thoughts to fruition.

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#### Introduction

Charles Thomas Jackson, MD (1805-1880; physician, chemist and geologist, Boston, Massachusetts, USA), was a prolific and productive analytic chemist and geologist. His laboratory in Boston was the best equipped in the city at that time. He was regularly sought for geological surveys and derived most of his income from these ventures. He enunciated ideas that were formative in the discovery of guncotton, the electric telegraph, and the use of ether as an anesthetic. Jay Backus Woodworth (1865-1925; geologist, Cambridge, Massachusetts, USA), however, once wrote of Jackson that: "Dr. Jackson did not always push his theories of geological phenomena to the fullness of conclusion and statement, which would enable us in the present day fully to understand them. He had too many irons in the fire to do as he would with all of them." Ralph Waldo Emerson (1803-1882; poet and essayist, Concord, Massachusetts, USA) thought that his brother-in-law was a prickly personality under the best of circumstances.<sup>2</sup> Richard Wolfe et al,<sup>3</sup> author of "The Head Behind the Hands" labeled Jackson an erratic genius because of his prodigious scientific accomplishments, but there was an eccentric aspect to his dealings with people. Julie Fenster<sup>2</sup>,

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author of "Ether Day" concluded that "Jackson ... was the sort to dash by a hundred superb ideas a day, like dandelions around his ankles, without stopping to appreciate the wonder on any single one of them." A student, Thomas Tracy Bouve<sup>4</sup> (1815-1896; businessman, philanthropist and geologist, Hingham, Massachusetts, USA), wrote: "Dr. Jackson was a man of great genius, and his intuitive perception of scientific truths was remarkable; but for some peculiarities hard to comprehend, he often contented himself to enunciating what he recognized as fact without striving to substantiate it."

This retrospective psychiatric analysis of Charles Jackson's life was undertaken to define the "peculiarities" and use these as a framework to understand why Jackson did not pursue his ideas further—specifically, why was he not the first to demonstrate the use of ether as an anesthetic. Using the *Diagnostic and Statistical Manual of Mental Disorders*, *Fifth Edition*, <sup>5</sup> we classify Jackson as having attention deficit hyperactivity disorder (ADHD), with an associated and/or comorbid diagnosis of oppositional defiant disorder (ODD).

Charles Jackson did interact with William Thomas Green Morton, MD Honorarily conferred (hc) (1819-1868; dentist, first public demonstrator of insensibility by inhalation of ether, Boston, Massachusetts, USA), whose life we have examined previously and felt was consistent with diagnoses of narcissistic personality disorder as well as antisocial personality disorder. Charles Jackson's life will be similarly examined in the context of ADHD—placing him in the subcategory of combined hyperactivity impulsive and inattentive. Oppositional defiant disorder will be explored to explain the deceitfulness, stubbornness, and lying that were characteristics of Jackson. The interaction between Jackson and Morton will also be explored.

As we have pointed out previously, retrospective psychiatric analyses are inherently problematic, particularly when applying modern diagnoses to individuals that one has not been able to observe

 $<sup>\,\,</sup>$  Funding from the Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital (Boston, MA).

<sup>☆☆</sup> Charles Jackson as ADHD.

<sup>\*</sup> Charles Jackson's life is appraised as a manifestation of ADHD to explain aspects of his behavior.

<sup>\*\*</sup> Presented as an abstract at the 18th Annual Meeting of the Anesthesia History Association. May 4, 2012. Kansas City. MO.

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personally and for someone who lived at an earlier time. <sup>6</sup> As we have done with Morton, this study will attempt to provide an understanding of why Charles Jackson's life evolved in the manner that it did.

#### **Attention Deficit Hyperactivity Disorder and ODD**

Attention deficit hyperactivity disorder is a neurodevelopmental disorder seen most commonly in children and extends into adolescence and adulthood. It is characterized by persistent, maladaptive symptoms of hyperactivity/impulsivity and inattention. It was first described in children in 1902 and now has a prevalence of 5%-8% of children worldwide. In recent years, adult manifestation of symptoms has gained more interest. The prevalence is 2.5%-4% of adults, and the symptoms are a continuation of criteria used for children.<sup>5</sup> As the name suggests, the diagnostic criteria are divided into two groups: inattention and hyperactive/impulsive. For both groups in children, six or more symptoms that have persisted for more than 6 months are required to meet diagnostic criteria. For adolescents and adults (age ≥17 years), at least five symptoms are required.<sup>5</sup> The symptoms of inattention are detailed in Table 1. The hyperactive/impulsive symptoms are listed in Table 2. Several symptoms are present before the age of 12 years in two or more settings. These symptoms interfere or reduce the quality of social, academic, or occupational functioning. Although individuals with ADHD, on average, achieve less academically, intellectually, and occupationally than their peers without ADHD, there is great variability.

Oppositional defiant disorder is a comorbid diagnosis seen in 30%-40% of individuals with ADHD. <sup>9,10</sup> This is characterized by negativity, hostility, and defiance to tasks that require self-application because the person with ADHD resists conforming to others' demands. As with ADHD, these symptoms can be variable in degree and can change with aging and circumstances.

#### Charles Jackson's Life

There are several excellent biographies of Charles Jackson's life. <sup>2,3,11</sup> Rather than a detailed summary, what follows are highlights that serve to illustrate the symptoms/manifestations of ADHD/ODD. This will be divided into sections describing his childhood through adolescence, young adulthood from medical school to further training, and his remaining adulthood.

#### Childhood to Adolescence

When Charles Jackson was 6 years old, a niece told how he laid a trail of gunpowder to his teacher's chair, then set it on fire, burning her dress. <sup>12</sup> His interest in chemical reactions continued, particularly in the family kitchen sink, causing his older sister, Lidian, to label his experiments as "chemical mania." By the time Charles was 16 years, Lidian regretted giving him his first chemistry set because of his "raising a rebellion in the kitchen with his experiments; he can gain more knowledge by studying than by trying so many." <sup>13</sup>

Inattention symptoms can include the following:

- 1) Failing to give close attention to details
- 2) Difficulty sustaining attention in tests
- 3) Not listening when spoken to
- 4) Not following through on instructions
- 5) Difficulty organizing tasks and activities
- Avoiding, disliking, or being reluctant to engage in tasks that require sustained mental effort
- 7) Losing things necessary for tasks
- 8) Easily distracted by extraneous stimuli
- 9) Forgetful in daily activities

#### Table 2

Hyperactive/impulsive symptoms are often the following:

- 1) Fidgeting with or tapping hands and feet
- 2) Leaving a seat in a situation where remaining seated is expected
- 3) Feeling restless
- 4) Inability to play or engage in leisure activities quietly
- 5) Talking excessively
- 6) Blurting out an answer before a question is completed
- 7) Difficulty waiting for his or her turn
- 8) Is often on the go, as if driven by a motor
- 9) Interrupting others

After their parents died when he was 13 years, Charles and his sister, Lidian, were raised by the oldest sister, Lucy, and her husband. Charles was sent to a boarding school in Lancaster, Massachusetts, where his brother-in-law, who eschewed "the sciences," expected Charles to study classical literature and fine arts. Despite the discouragement, Charles' interest in chemistry continued and expanded into geology. Both of these areas of science were viewed as new and speculative, with no practical applications. When a family friend or teacher let his sister and brother-in-law know that Charles spent his free time studying science, he disavowed any desire to study the sciences. He hid his interests from his family and in letters continued to state that he had no interest in science. <sup>14</sup>

#### **Further Education**

When he had finished boarding school, Jackson was expected to continue his classical studies at Harvard College. 15 He resented the pedantic classicism that required sitting, listening to lectures, taking notes, and reading texts in Latin and Greek. After a year, working in a counting house in Boston, he was allowed to enter the Massachusetts Medical School of Harvard University under the tutelage of Drs. James Jackson (1777-1867; physician, Boston, Massachusetts, USA) and Walter Channing (1786-1876; physician, Boston, Massachusetts, USA). In this era, before the advent of scientific schools, the study of medicine, with an emphasis on laboratory methods and chemistry as well as physiology and natural history, provided a solid foundation for the study of geology. During medical school, (1786-1876; physician, Boston, Massachusetts, USA). After receiving his MD in 1829, Charles Jackson went to Paris, France, to allegedly further his medical education at the University of France. He also took courses in mineralogy and geology at the Royal College of Mining, Paris, France, attended scientific lectures at the Sorbonne, and participated in geological surveys. 16

After entreaties by his sisters to come home and practice medicine, Jackson made the return voyage in 1832. While at sea, he gave several scientific lectures to any and all who would listen. When a dolphin was caught in a ship's crew net and brought onto the deck, Charles Jackson dissected the mammal as a demonstration to the ship's passengers. <sup>17</sup> Samuel Morse (1791-1872; artist, inventor of the single-wire electromagnetic telegraph and Morse Code, Utica, New York, USA) was a passenger on the voyage and had a conversation with Jackson about ideas for an electric telegraph. Jackson shared his thoughts, sketching out a prototype. At the end of the voyage, Jackson did nothing further with the idea, whereas Samuel Morse enlisted collaborators/supporters and went on to develop the first working model of the electric telegraph.

#### Adulthood

Upon returning to New England, Charles Jackson opened a medical practice in Roxbury, MA. As a young physician in a city with an abundance of practitioners, Jackson found that his practice was not

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