In Defense of the Pickwickian Syndrome

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In 1956, Burwell, et al investigated the association of obesity, somnolence, twitching, cyanosis, periodic respiration, and right ventricular hypertrophy and failure (1). Interestingly, many studied this striking constellation of symptoms prior to 1956. Kryger (2) recently noted similar symptoms in Dionysius, the tyrant leader of Heracleia in Pontus during the reign of Alexander the Great (c.360 AD). John Fothergill, an eighteenth century British physician, described an interesting patient who was obese with a "fresh sanguine complexion, perpetual drowsiness, and . . . such a degree of somnolency . . . that he could scarce keep awake whilst he described his situation" (3). William Wadd, Surgeon Extraordinary to the King of England in 1822 wrote: "We find the pulse of fat people weaker than in others and from these circumstances also we may easily understand how the corpulent grow dull, sleepy, and indolent . . . . [One patient] became at length so lethargic that he frequently fell asleep in the act of eating, even in company" (4).

William Osier (1849-1919), as talented a scholar of history and literature as he was of medicine, noted a classic description of these symptoms, in Charles Dickens' first novel, The Posthumous Papers of the Pickwick Club (1836-1837) and proposed the term "Pickwickian" in reference to these fat, sleepy people in his famed textbook of medicine (5). Burwell and his coworkers further defined the major features of the syndrome giving great importance to the name Pickwickian syndrome because they paralleled, as Osler noted, the characteristics of Joe, a "fat and red-faced boy in a state of somnolency," a minor character in The Pickwick Papers (6).

It should also be noted that Dickens refers to Joe as "Young Dropsey," "Young Opium-Eater," and "Young Boa Constrictor" in reference to his obesity, lethargy, and enormous eating habits, respectively (6). One of the most striking features of the syndrome is the remarkable degree of drowsiness the patient experiences, causing sleep to overcome the patient in the course of ordinary activities.

Interestingly, the eponym "Pickwickian syndrome" has generated a good deal of controversy. Comroe (7), Vaisrub (8), and Keelan (9) take exception to the Dickensian appellation. Comroe stated that "errors pop up over-and-over whenever medical scientists decide to draw from literature to 'enrich' medical terminology. Such errors rarely advance and usually retard medical science (7)."

One of Comroe's objections concerning "Pickwickian" was that the term refers only to members of the Pickwick Club, founded by Samuel Pickwick. Yet, as Comroe and others correctly pointed out, Joe the Fat Boy was not a member of the Pickwick Club. Joe the Fat Boy's lack of status in that esteemed organization is, however, information that has been easily accessible for over 140 years and is not crucial to the controversy about the name. I should like to "pass over the 'charming' literature error" and defend the clinical aspects of Dicken's description of the syndrome.

Another important consideration is that two types of obesity-sleep apnea have been classified. In the first type, patients have apnea during sleep but have normal ventilation and drive to breathe while awake (2). The second type of patient suffers from hypoventilation while awake as well as sleep apnea; the latter is the true "Pickwickian" noted by Burwell (1).

Before the medical world dispenses with the name Pickwickian syndrome in favor of something like "obesity-hypoventilation syndrome," it ought to reconsider Dickens' history of Joe the Fat Boy. This comparison is worthwhile for two reasons. First, "medicine needs all the ties to the broad stream of human culture that it can develop" (10). Second, a change in terminology would deprive Charles Dickens of credit for creating "still the single most accurate description of the syndrome" (10).

Dickens' description of Joe the Fat Boy does, indeed, present a cohesive and nearly complete description of a patient suffering from the "Pickwickian syndrome":

A most violent and startling knocking was heard at the door; it was not an ordinary double knock, but a constant and uninterrupted succession of the loudest single raps, as if the knocker were endowed with the perpetual motion, or the person outside had forgotten to leave off.

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Mr Lowton hurried to the door... The object that presented itself to the eyes of the astonished clerk was a boy—a wonderfully fat boy... standing upright on the mat, with his eyes closed as if in sleep. He had never seen such a fat boy, in or out of a traveling caravan; and this coupled with the utter calmness and repose of his appearance, so very different from what was reasonably to have been expected of the inflicter of such knocks, smote him with wonder.

“What’s the matter?” inquired the clerk.

The astonished boy replied not a word; but he nodded once, and seemed, to the clerk’s imagination, to snore feebly.

“How do you come from?” inquired the clerk.

The boy made no sign. He breathed heavily, but in all other aspects was motionless.

The clerk repeated the question thrice, and receiving no answer, prepared to shut the door, when the boy suddenly opened his eyes, winked several times, sneezed once, and raised his hand as if to repeat the knocking. Finding the door open, he stared about him with astonishment, and at length fixed his eyes on Mr Lowton’s face.

“What the devil do you knock that way for?” inquired the clerk, angrily.

“Which way?” said the boy, in a slow sleepy voice.

“Why like forty hackney-coachmen,” replied the clerk.

“Because master said I wasn’t to leave off knocking till they opened the door for fear I should go to sleep,” said the boy (6).

In the above passage from Pickwick Papers, we note Joe’s extreme obesity, drowsiness, winking, ruddy complexion, and the fact that he “breathes heavily.” Dickens does not describe cyanosis. The number of times he mentions these symptoms is immaterial, although others have complained that a single mention of being “red-faced” hardly constitutes polycythemia, nor does Joe’s heavy breathing represent periodic respiration (7,9). Consider, however, how many times a physician would write down a symptom or observation of “red-faced” on a patient’s history. Clearly, repetition, both in medicine and literature, is considered extraneous.

Over the years since Burwell’s description of the Pickwickian syndrome, other manifestations have been noted. Dickens, however, would not have been able to record these without the tests of modern medical science. For example, he could not explain why Joe was so sleepy (as Gastaut, et al (11) did in 1967) without the use of an electrocardiogram, electroencephalogram, oral spiromgram, electro-oculargram, and diaphragmatic electromyogram. Gastaut, et al showed that some Pickwickian patients do not breathe normally at night, since their sleep is interrupted by at least two types of apnea. The first is central apnea, in which the patient does not make an effort to breathe, while the second is obstructive, i.e., the act of inspiration moves no air due to obstruction in the upper airway, such as the tongue falling against the posterior pharyngeal wall. Apnea may occur hundreds of times a night (12). Since the patient wakes up repeatedly during the night, he or she (much more often a he) is constantly sleepy during waking hours, just like Joe. Another result of the recurrent apneas may be failure of the right side of the heart, resulting from pulmonary hypertension induced by hypoxemia and hypercapnia.

Dickens would also have found it difficult to write about the signs of right ventricular hypertrophy and failure characteristic of the syndrome without the use of electrocardiography, radiography, or a cardiac catherization laboratory. One is tempted to believe, on the other hand, that had he been trained in and practiced medicine, his keen powers of observation may have led to even more extraordinary descriptions!

Perhaps there are some unknown factors in our knowledge of the Pickwickian syndrome, as there are in many of the beliefs physicians hold as medical facts. Physicians were arguing over the exact pathology of Joe the Fat Boy long before Burwell and his coworkers first suggested the eponym “Pickwickian” for the association of extreme obesity with alveolar hypventilation. Diagnoses have since ranged from Cushings’s syndrome (pituitary basophilic hyperactivity probably secondary to disturbed hypothalamic function) (13) to narcolepsy (14) to Frohlich’s syndrome (obesity, retarded growth, and genital hypoplasia associated with a hypothalamic tumor) (15). Some went so far as to suggest that the Pickwickian syndrome should be called the “Fee-Fi-Fo-Fum syndrome,” after the giant in the fairy tale, “Jack and the Beanstalk,” who shares some of Joe’s symptoms (16). However, one is tempted to side with Robin (10) in the battle to preserve the term “Pickwickian” as a name for the obesity-hyperventilation syndrome. Dickens’ 1837 description, today, seems as accurate and edifying as it was in 1956 when Burwell, et al (1) paid homage to the great novelist.

Indeed, it is a valuable exercise for the physician to use literature and art to further his or her medical expertise. Art and literature, not unlike medicine, are a reflection of the workings of the human mind and spirit. Clearly, the more aspects of humanity the physician works to understand, the better he or she will function professionally and personally. William Osler referred to this oft-ignored avenue of education in his address “The
Master Word in Medicine”: “It is not for all, nor can all attain to it, but there is comfort and help in the pursuit, even though the end is never reached” (17). As physicians dedicated to the art of medicine, therefore, we must work to appreciate the “virtuosity required of the writer who successfully conveys an understanding of humanity just as one admires the diagnostic skills of an internist” or the technique of a surgeon (18). It would be more accurate, from a literary and scientific standpoint to call the disease Joe the Fat Boy of Pickwick Papers type of sleep apnea, but it is unlikely that this terminology would be more effective. Pickwickian syndrome, as a label to identify obesity, sleep apnea, and daytime hypoalveolar ventilation, is not a perfect name, but it does bring art and medicine closer together and serves as a stimulus for the student of medicine to read a Dickens’ novel and come to appreciate the writer’s descriptive talents.

References


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