# Clinical history of Blanche Wittman and current knowledge of psychogenic non-epileptic seizures

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# ABSTRACT

**Introduction.** Blanche Wittman (B.W.), the pivotal figure in André Brouillet's painting *Une leçon clinique à La Salpêtrière* (A clinical lesson at La Salpêtrière), was presented by Jean-Martin Charcot as a model example of hysteria. It is unclear whether the renowned neurologist's personality and the isolation suffered by hysteric and epileptic patients may have resulted in a particular type of hysterical attacks.

**Material and methods.** B.W.'s hysterical attacks as reported by Bourneville and Regnard are compared to psychogenic non-epileptic seizures (PNES).

**Results.** According to recent studies, B.W.'s hysterical attacks share numerous features with PNES, including their long duration, presence of repetitive oscillatory body movements during episodes, a history of childhood abuse, and attraction to certain objects. Charcot used hysterical patients' susceptibility to hypnosis as a tool to distinguish hysterical attacks from epileptic seizures; hypnosis has in fact been found to be no different from placebo in some video-EEG laboratories. However, certain features, such as ovarian hypersensitivity and displaying theatrical poses (*attitudes passionnelles*) at the end of an attack of *grande hystérie*, were rather peculiar and were probably connected with the atmosphere at La Salpêtrière and Charcot's authoritarian personality. Charcot's hypothesis that episodes were caused by 'functional lesions' is concordant with findings from functional MRI.

**Conclusions.** The case of B.W. provides valuable information for understanding some phenomena associated with hysteria.

## **KEYWORDS**

Charcot, Blanche Wittman, psychogenic non-epileptic seizures, ictal phenomenology, hysteria, Bourneville

### Introduction

*Une leçon clinique à La Salpêtrière*, a well-known painting by André Brouillet (1857-1914), made Blanche Wittman (B.W.) the most famous hysterical patient in history (Figure 1). In fact, Per Olov Enquist wrote a novel featuring B.W. as one of the main characters.<sup>1</sup> The painting was exhibited with great success at the *Salon des Indépendants* in the spring of 1887. Brouillet, a student of Jean-Léon Gérôme (1824-1904), was an academic painter of landscapes and historical events at the height of the Impressionist era (Figure 2).<sup>2</sup>

The central topic of the painting is very well known. Blanche, a young woman, falls down while Professor Jean-Martin Charcot (1825-1893), indifferent to the commotion behind him, continues presenting his case to

Corresponding author: Dr Santiago Giménez-Roldán E-mail: sgimenezroldan@gmail.com an expectant public. The patient had probably undergone a session of hypnosis. Detailed observation of the picture shows that the patient falls delicately, apparently unconscious, probably during one of her frequent attacks of grande hystérie. She is standing despite exaggerated extension of the trunk, with her head tilted slightly backwards. She has a placid expression and closed eyes, as though she were dreaming; this, Charcot suggested, differentiated the episode from an attack of catalepsy. Her left arm is abnormally extended; this is the 'contracture' frequently described in the final stage of hypnosis. Her hand, in turn, shows a marked palmar flexion. We do not know the duration of the episode. However, this detail is essential in detecting malingering, given that a person feigning a hysterical attack would be unable to hold such an uncomfortable position for a long time.

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**Figure 1.** Main figures in André Brouillet's *Une leçon clinique à La Salpêtrière*: Charcot, Babinski, Mme. Bottard, and Blanche Wittman

Three other figures complete the scene. Joseph Babinski (1857-1932), Charcot's chef de clinique, holds the patient as she falls. Some time later, Babinski would cast doubt on his mentor's pathogenic explanations and hypothesise that hysterical attacks were caused by suggestion or pithiatism.<sup>3,4</sup> Babinski is assisted by Marguerite Bottard (1822-1906), a secular nurse trained at the new nursing school and who directed the Pariset ward, where Charcot's patients were institutionalised (Figure 3).<sup>5</sup> She was still working in 1905, as reported by Alphonse Baudouin (1876-1956),6 a patient who had been institutionalised at the centre. The face of Ecary is barely visible; this young nurse is the only of the 29 figures depicted whose surname is not known.<sup>7</sup> This dramatic scene took place in one of Charcot's popular Friday lessons, which he gave in teaching rooms near his office.8

The purpose of this paper is to review the case of B.W., a model of hysteria at that time, comparing her clinical history with current knowledge of symptoms associated with psychogenic non-epileptic seizures (PNES). In his

lessons, Charcot presented other young hysterical patients, such as Geneviève, Justine Etchevery, Augustine Gleizes, and Rosalie Lerroux.<sup>9</sup> These patients were probably just as representative of hysteria as B.W., but they did not have the privilege of appearing in a painting alongside the entire *Ècole de La Salpêtrière*.

## Material and methods

We gathered clinical data from Marie Wittman (Blanche was the name of one of her sisters, which Marie would murmur during her fits) from a book by Bourneville and Regnard, which devotes around 50 pages to this patient.<sup>10</sup> The description of the atmosphere at La Salpêtrière is based on the reports of several patients.<sup>6,11,12</sup> Information about Charcot's ideas on hysteria, hystero-epilepsy, and hypnosis was gathered from his *Oeuvres complètes*<sup>13</sup> and several biographical works on Charcot and Bourneville.<sup>8,9,14-16</sup> We also analysed recent medical literature on PNES to compare the condition to the attacks experienced by B.W.

### Results

Clinical history and progression of Blanche Wittman according to Bourneville and Regnard (1878)

Marie Wittman, a dressmaker born in Paris, was admitted to the section for non-alienated epileptics at La Salpêtrière on 6 May 1877; she was 18 years old. She was blonde and had a lymphatic complexion, with voluminous breasts and numerous freckles. She was 1.62



**Figure 2.** Portrait of genre painter André Brouillet (A); cover of the catalogue of the painting and sculpture exhibition held in Paris in 1887 (*Salon des Indépendants*, 1887) announcing Brouillet's well-known painting (B)



**Figure 3.** Secular nurse Marguerite Bottard in her later years (A) and on the cover of the Sunday magazine *Petit Journal* (10 January 1898) after she was awarded the medal of honour; the image shows her in one of the women's wards at La Salpêtrière (B). Image kindly provided by O. Walusinsky; date unknown



**Figure 4.** Blanche Wittman at the age of 18, during her first stay at La Salpêtrière (A) and some years later, with signs of obesity, probably while she was working as an assistant at Londe's photography laboratory (B).

metre tall and weighed 70 kg. She was unable to read and write and had barely average intelligence (Figure 4).

He father, a Swiss carpenter, experienced violent fits of rage; on one occasion, the man once "even threw B.W. out the window".<sup>10</sup> Her mother, who died when B.W. was four (or when she was 14, according to another section of the same book), experienced nervous attacks when she was upset. B.W.'s parents had nine children, five of whom died ("four due to seizures and one due to epilepsy").

As a result of seizures B.W. experienced when she was 22 months old, she became deaf and stopped speaking; however, she recovered her hearing and speech over time. She began to work as a dressmaker when she was 13; her employer harassed her whenever she was alone. She began a sexual relationship at the age of 15. Eight months later, she decided to admit herself to hospital to escape the situation. She reported having a young lover called Alphonse some time later. At that time, she sought refuge in a convent on the rue du Cherche-Midi, where she constantly suffered nocturnal attacks. After that, B.W. had another lover called Louis. She then decided to start working as a servant in La Salpêtrière with the idea that this may make it easier for her to be admitted to that institution. She was eventually successful in this.

Examination upon admission revealed right hemianaesthesia and decreased sensitivity in the left arm,

in addition to ovarian hyperaesthesia immediately preceding attacks. "As in all hysterical patients", she was keen on collecting objects, for example a blue ball, artificial roses, bright-coloured prints, and religious images. In fact, she herself wore a scapular.

Barely seven days after her first admission, she began to experience attacks with identical stages to those described by Charcot: epileptoid, generalised clonus, and delirium. She was reported to have episodes lasting several hours in which she would keep her eyelids closed, foam at the mouth, jerk her arms and back, and become rigid. B.W. moved her head from side to side and raised it from the pillow for several seconds while she flexed and extended her legs repeatedly. She mumbled; the only intelligible word was "Blanche", the name of one of her sisters. Due to B.W.'s voluminous abdomen, it was not possible to continue with ovary compression.

In the following days, the patient complained of "a sensation of a ball going up and down constantly". "Normal vaginal secretions" were found on multiple occasions, and attacks recurred uncontrollably (on 9 December 1877, she suffered up to 54 attacks in six hours). Attacks ceased with inhalation of amyl nitrate, the most effective of all methods tested at the time. On 11 May 1878, B.W. displayed such violent behaviour that Charcot decided to refer her to the service directed by Delasiauve, Bourneville's former master, where she continued under observation. Her attacks persisted

despite doctors placing ether-soaked compresses against her nose.

It was agreed that she should wear an ovary compressor (Figure 5), a device intended to prevent hysterical attacks. The Ramsden machine was used to produce static electricity in order to make sensitivity reappear in the right side of her body. On 22 February 1879, B.W.'s medical history notes that "thankfully, her menstruation has returned", although she experienced ten hysterical attacks that same morning.

During delirium, B.W. reproduced love scenes; on other occasions, she reported being in a cemetery or seeing a child trapped under debris. "I cursed my parents, only the earth is familiar to me!", she once exclaimed. On other occasions, she saw "animals, snakes coming out of a box", and exclaimed "A naked woman! Oh, my God, I'm going to die!". Utterances were sometimes unintelligible: "Palapalapola!" [sic], she exclaimed, moving her arms like a windmill. Attacks of delirium were sometimes isolated rather than associated with the previous stages (epileptoid and generalised clonus); response to ovary compression or ether inhalation was unpredictable.

Interestingly, delirium was on one occasion triggered by the sight of a clerk carrying the deformed head of a patient with a giant tumour from the autopsy room to the photography laboratory.<sup>10</sup> Her clinical situation was so critical that she required a feeding tube, despite which she vomited the administered liquids. Once again, examination disclosed "moistness of the vagina and vulva". Doctors used a pin to write the name of the hospital and B.W.'s own name onto her skin, causing a papular erythema "measuring several centimetres". B.W. was also reported to have bought tobacco, which she smoked in a pipe. In the following months, she went on to experience anaesthesia of her extremities, contractures, and stomach complaints, as reported in the 28 pages dedicated to this patient.

### The tragic fate of Blanche Wittman

On 11 October 1889, B.W. returned to La Salpêtrière for the third time, on this occasion not as a patient but as an assistant at the photography laboratory directed by Albert Londe (1858-1917), a pioneering medical photographer.<sup>17,18</sup> A year later, Londe became the director of the new radiology department, with B.W. joining him. This was the beginning of another tragic period in her life, ending with her death in August 1909



**Figure 5.** Ovary compressor, a metal device used at La Salpêtrière to prevent hysterical attacks. Understandably, Charcot admitted that this device could not be worn for extended periods.

at the age of 56, due to a haemorrhage of undetermined origin. As Baudouin put it after visiting the hospital where he had trained<sup>6</sup>:

As I said before, Blanche was one of the first radiology assistants; she was also one of the early victims of radiation-induced cancer, a disease that ravaged the pioneers of this new discipline, causing them to lose limbs. She stoically endured the last agonising days of life. She suffered one amputation after another, beginning with one finger, soon followed by several others, then her hand, her forearm, and finally her entire arm; then it moved to the other side.

### Remarks

The Swedish writer Per Olov Enquist's novel *The story of Blanche and Marie* describes the probably untrue relationship between B.W. and Marie Curie, Maria Salomea Sklodowska (1867-1936), the pioneer in radioactivity research and two-time recipient of the Nobel prize.<sup>1</sup> Although the novel purports to be based on historical events, it presents B.W. as Professor Charcot's lover. According to the story, B.W. "loved him more than her own life" despite Charcot tormenting her with an ovary compressor.<sup>1</sup> After multiple amputations, B.W. was little more than a talking head and trunk, and spent the rest of her days on a wooden cart, propelling herself around with her stumps. The ambiguous relationship



**Figure 6.** Studio photograph of Jane Avril, born Jeanne Louise Beaudon, showing her skills as a Moulin Rouge dancer (A). Poster promoting the Moulin Rouge, by painter Toulouse-Lautrec (B)

between B.W. and Marie Curie unfolds under the deadly green glow of radium. The medical literature has published letters decrying the novel's lack of historical rigour.<sup>19</sup>

B.W. possibly suffered generalised epilepsy with febrile seizures plus (GEFS+), a genetic disorder caused by mutations in the GABA(A) receptor gamma 2 subunit.<sup>20,21</sup> This is supported by B.W.'s personal and family history: four of her siblings experienced seizures during childhood, as she herself did when she was 22 months old, resulting in delayed language acquisition. Charcot drew a clear distinction between epilepsy and psychogenic seizures; these conditions co-occur in barely 10% of all epileptic patients.<sup>22</sup>

Bourneville and Regnard's thorough descriptions of B.W.'s hysterical attacks are surprisingly similar to the symptoms associated with PNES as we know them today.<sup>10</sup> B.W.'s father had a violent personality and she was sexually abused by her employers during adolescence.<sup>23</sup> Furthermore, she displayed oscillatory movements of the head and trunk during the attacks<sup>24</sup>; episodes were prolonged and she kept her eyes closed during her hysterical fits. All these features are currently associated with PNES.<sup>26</sup> In line with B.W.'s peculiar, childish habit of collecting small toys, the literature reports that a high percentage of patients with PNES bring a stuffed animal to the video-EEG monitoring unit (the teddy bear sign).<sup>27</sup> An association with other somatic

symptom disorders is not infrequent.<sup>28</sup> However, opisthotonos, a frequent manifestation of hysteria at La Salpêtrière, is rarely reported today.<sup>24</sup>

## The atmosphere: the girls of La Salpêtrière

Some manifestations of hysterical attacks have been reported to be exclusive of patients at La Salpêtrière due to the spread of a "culture of hysteria" at that institution, as Hippolyte Bernheim, a bitter enemy of Charcot, ironically stated.<sup>4</sup> The final stage of delirium, associated with exclamations of amorous content, hallucinations, and ecstasy or even demonic cries, is infrequently described today; these verv manifestations have also been reported in small, isolated communities in the Appalachians.<sup>29</sup> Another peculiarity of the hysterics at La Salpêtrière was the alleged ovarian hypersensitivity; this symptom was described as a state of sexual arousal manifesting as vaginal lubrication, which doctors attempted to control with cruel devices designed to compress the ovaries.

Bernheim was not the only one to criticise Charcot's methods; William R. Gowers (1845-1915), probably the best known British neurologist, also mistrusted the tense atmosphere at La Salpêtrière. Gowers took employment at the National Hospital for the Paralysed and Epileptic, in Queen Square, London, in 1870. Only one of the 360 outpatients he received during his first year there was diagnosed with hysteria.<sup>30</sup> La Salpêtrière, in contrast, accommodated numerous young women aged 15 to 30 years, many of whom were abandoned unmarried mothers; these women lived in a closed-off atmosphere among epileptic patients and bedridden elderly women and had to live with an unbearable stench.<sup>31</sup>

Another remarkable patient at La Salpêtrière was dancer Jane Avril, born Jeanne Louise Beaudon (1868-1943) (Figure 6). Jane Avril was made famous by the painter Toulouse-Lautrec, a passionate admirer who painted several posters featuring the dancer to advertise the Moulin Rouge. She was admitted to La Salpêtrière on 28 December 1882 under Charcot and institutionalised in the Pariset ward for epileptics and hysterics. Although she was only fourteen, she had had an eventful life, being the daughter of an Italian marquis and an abusive mother. Some fifty years later, she published her memoirs, an invaluable testimony of the atmosphere behind the scenes at La Salpêtrière, which she witnessed for 18 months, surrounded by 'stars of hysteria'.<sup>11</sup> "It was hilarious to see the pride in the faces of those crazy girls as they were chosen by the master." She was astounded by the number of "wise men" who came to witness such a farce. The girls at La Salpêtrière told Jane Avril their secret: they would stop twisting and contorting once doctors moved away from their beds. "Come and press hard on my ovaries", they would say. That simple procedure was supposed to be able to suppress hysterical attacks immediately. The atmosphere at La Salpêtrière was infectious, fuelled by the great interest these patients aroused among the doctors.

The situation at La Salpêtrière, however, was no different from that of epidemic hysteria, or mass hysteria,<sup>32</sup> a phenomenon occurring among adolescents and young women living in isolation, for example in orphanages,<sup>33</sup> and in celebrations with a strong sentimental component.<sup>34</sup>

Differential diagnosis of hysterical attacks according to Charcot: hypnosis as a placebo

At that time, the complexity of epileptic manifestations was still to be fully understood; it is therefore understandable that Charcot placed so much emphasis on differentiating hysterical attacks from epileptic seizures. This ultimately led him to apply hypnosis, which he considered a useful tool for the differential diagnosis of hysteria. Hysterical patients, such as B.W., were particularly susceptible to hypnosis, whereas those with epileptic seizures were not. As Charcot himself was not very skilled in this technique, he referred refractory cases to Axel Munthe, one of his former students. Munthe used hypnosis exclusively to reduce pain during childbirth or surgery.<sup>35</sup> B.W.'s unusual susceptibility to hypnosis continued while she worked as an assistant at the photography laboratory directed by Albert Londe, an exceptionally talented photographer who had no university studies (Figure 7).<sup>36</sup>

The use of placebo-based suggestive seizure induction for diagnostic purposes is still controversial.<sup>37,38</sup> Charcot wondered whether inducing seizures was immoral: "Probably it is not, if it helps in providing treatment to a process that otherwise would have no cure". In any case, the validity of hypnosis was confirmed by several renowned psychologists at La Salpêtrière, including Charles Féré and Alfred Binet. They opposed the purely psychological approach to hypnosis of the Nancy School, founded by Hippolyte Bernheim (1837-1919).<sup>5,39</sup> The



**Figure 7.** Albert Londe hypnotising Blanche Wittman, 1880. Taken from O. Walusinski.<sup>36</sup> The picture seems to have been taken in a photography studio, which suggests that B.W. may have voluntarily feigned a hysterical attack for the camera.

neuroanatomist Jules Bernard Luys (1828-1897), a contemporary of Charcot's, also conducted public demonstrations of hypnosis at La Charité, and even established a hypnotherapy laboratory for that purpose.<sup>40</sup>

### Hysteria or simulation?

Charcot was well aware that some of the neurological disorders he studied might in fact be feigned.<sup>41</sup> As B.W. explained in an interview twelve years after her master's death<sup>6</sup>:

"Listen, Blanche. I know there are things you don't want to talk about, but you've known me for a long time and you know that I have no intention to make fun of you. I'd like you to explain something about the attacks you used to have." After hesitating a moment, she replied: "Well! What do you want to know?". "They claim that all these attacks were faked, that the patients pretended to be asleep and that the whole thing was a joke on the doctors. What's the truth in all that?". "None of it's true. It's all lies; if we fell asleep, if we had attacks, it was because we were helpless to do otherwise. What's more, it was very unpleasant". And she added: "Fakery! Do you think it would have been easy to fool Monsieur Charcot? Yes, there were tricksters who tried; he simply gave them a look that said: 'Be still'. That was how this 'confession of a hysteric' ended, with a homage to the great deceased neurologist.

There is no reason to think that the mechanisms underlying B.W.'s attacks were different from those of patients with PNES today. Therefore, both entities have several features in common. In the same way as stressful situations may cause epidemic hysteria in isolated populations, the atmosphere at La Salpêtrière was probably responsible for certain peculiar characteristics of hysteria, such as the trigger factors for hysteric attacks and the fact that these stopped with compression of the ovaries. MRI may show altered routes of information and emotional processing, as well as abnormal coping strategies, in patients with PNES; these patients may therefore be unable to cope with emotional trauma.<sup>23</sup> Had MRI been available at that time, Charcot would probably have reported similar findings in B.W.

### Conclusions

Despite minor phenomenological differences between hysteria and PNES, B.W. represents a key case for understanding some of the characteristics of hysterical attacks and current PNES.

#### **Conflicts of interest**

The author has no conflicts of interest to declare.

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