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Medicine in Alexandre Dumas père's *The Count of Monte Cristo*

Alexandre Dumas was one of the most prolific writers of all time. First a successful playwright, he later expanded into every aspect of profitable writing which would include hundreds of historical and romantic novels, essays, plays, travel books, cook books, and hundreds of newspaper stories and articles. His books number over 600, but no one is sure exactly how many and André Maurois said no one has read all of Dumas, a feat as impossible as the writing would seem to be. Dumas wrote 4-6 novels at a time, publishing a shelf of books each year. During the period 1841 to 1850, nine years, he published 41 novels, 23 plays, 7 historical works, and 6 travel books, all of them successful. A recently found novel of Dumas (*La Maison de Savoie*) is 2500 pages long, which is understandable as he serialized his novels in newspapers, continuing the story day after day, and he was paid by the line.

The Count of Monte Cristo is Alexandre Dumas' idealized personal fantasy, one which is a central one in fable and literature. Perhaps it has occurred to every child who believes they are unjustly treated, blamed or bullied, that they might return in a form unrecognizable to enemies, with great power, wealth, secret knowledge and skills with which they can take revenge in clever and devious ways, righting the grievous wrongs. It may be a childish dream ideal but it lingers in the hearts of adults. *The Count of Monte Cristo*, a *roman de mœurs*, became one of the most popular novels in the world. Craig Bell said that "In *Monte Cristo*, Dumas embodied Romanticism", and there continue to be new films and TV adaptations, as well as an excellent and faithful 1996 translation of the book by Robin Buss which demonstrates what Craig Bell calls the "eternal contemporaneousness" of the Count of Monte Cristo.

It has been inappropriately looked upon as a children's adventure story, but one would be surprised by a children's book that had a female serial poisoner, two cases of infanticide, a fatal stabbing, three suicides, an extended scene of torture and execution, drug induced sexual fantasy, illegitimacy, transvestitism, lesbianism and numerous drug effects. English translations softened these elements of the novel to suit delicate Victorian tastes, and those limp abbreviated late 19th century English translations dominate the bookshelves in the English speaking world.

Dumas was writing at a time when French romanticism clashed with classicism, but he was able to combine elements of both, as did other French romantic writers. The Count himself is an idealized figure, and I will suggest he is an idealized physician, modeled on the mid 19th century vision of the French physician, in a time when Paris medicine was at its peak, surpassing the previous glories of Padua, Leyden and Edinburgh as centers for medical training and research. Romanticism superimposed on a growing scientific era gave rise to a superhuman image of a physician.

THE COUNT OF MONTE CRISTO

Set in the Napoleonic era, *The Count of Monte Cristo* relates the story of Edmond Dantès, a man sentenced to life imprisonment in the famous Marseille fortress, the Château d'If, for a crime he did not commit. Betrayed by three jealous acquaintances, he is dragged off to prison on the eve of his marriage to the beautiful Mercedes. Meeting another prisoner, the Abbé Faria, who is slowly digging himself out of prison, he learns that the Abbé knows of a treasure of the Borgias hidden on the Isle of Monte Cristo. After his amazing escape from the fortress, Dantès reappears some years later as the Count of Monte Cristo with a complex plan to affect terrible vengeance on the enemies who put him there.

I will now review the numerous medical references in the novel, and how medical, pharmacological and toxicological knowledge are central to the plot, and then return to where Dumas obtained this knowledge.

Brain Fever

The first disease appears in the opening pages when the ship's captain dies of brain fever, a term indicating inflammation of the central nervous system, encompassing our concepts of both encephalitis and meningitis. Brain fever was an accepted medical term in the 19th century and used by many authors as a very effective dramatic technique of having someone lapse into coma, sometimes to recover, sometimes not.

Faria's Disease

Following the detailed symptoms of the progression of starvation to near death while Dantès is in prison, there is the puzzling but well described disease in his fellow prisoner and escapee, the Abbé Faria. Faria explains that he has a convulsive disorder that causes him to shriek, foam at the mouth, stiffen and go unconscious. It must be treated with a red medicine he has in his cell. In the 19th century opium was imported as a solid opium, a brown bitter granular powder, but much of it was sold as a red-brown tincture, particularly as laudanum. Faria, who has an aura or warning of his convulsions, announces, "I'm going to have a cataleptic fit."

In subsequent attacks Faria becomes hemiplegic and aphasic, an interesting and correct designation of a major left hemisphere lesion, and this is being described at a time when cerebral localization was not yet defined in medicine. Faria tells Dantès after he recovers that he knows it will be fatal as both his grandfather and his father died in these seizures. So what is the origin of this disease which we can characterize as a late onset, familial, recurrent, dominant hemisphere, focal seizure disorder with postictal paralysis and aphasia, that ends in death? As we shall see, everything else in Dumas' writings is accurate clinical observation, but this well described disease still evades my diagnostic efforts.

The Chronic Illness of Madame Caderousse

After Dantès' escape we meet the wife of his old friend, Gaspard Caderousse, a pale, sickly, thin woman, who is described as being constantly ill in her bedroom, except when there are conversations below and she sneaks to the stairs to listen. She continually complains of varied symptoms and performs dramatic displays of physical and emotional distress. Her husband has learned to steel himself against the constant nattering of his sickly wife and answers, "be quiet! It's God's will".

Another emotional reaction throughout the book is the common 19th century phenomenon of swooning in any situation of stress, mostly by women, but some of the men are said to faint in acute states of shock as well. In this era, and up to the Victoria era, it was a socially acceptable emotional response for women to faint and swoon.

Death and Dying

Dantès' father dies of starvation and again we have the symptoms of starvation well described, misdiagnosed by the doctors as gastroenteritis, for which they prescribe fasting. Dantès then reflects on the nature of death, and how this differs in different cultures, and says it isn't enough to have someone who murders a loved one to experience a few seconds of the guillotine blade passing between the trapezius and the occipital bone (note his use of anatomical terms). He uses other medical terms and metaphors and describes people fleeing a house as if they had a case of Asiatic cholera or the plague.

When Caderousse is stabbed, the Count administers a mysterious powerful red medicine he carries with him, refusing the dying man another dose when he begs for it, warning that more would kill him, but he allows him to sniff the vapour from the bottle. Caderousse dies of blood loss.

The Count's Sleeping Potion

A friend notes that the Count has not eaten in twenty-four hours and that he can apparently sleep at will. When asked, the Count mentions that he has an infallible recipe for that. Showing a small emerald case containing pea-sized, greenish, acrid smelling pills, he says, "I make no secret of it, it is a mixture of some excellent opium for which I made a special trip to Canton in order to get the purest quality, and of the best hashish grown in the Orient."

Travel as Medicine

The Count continues to act like a physician in many of his encounters. He carries his own supply of powerful medications, many of his own concoction, and he diagnoses and treats anyone with an ailment or injury. He administers medicine to young Villefort when he has an accident in his carriage and then treats the excited horses with yet another medicine. For others there is healthy preventive advice. A young man with headaches consults him about what he should do as all therapies have failed. The Count advises, "Travel. We'll go where the air is pure, where all sounds are soothing, where no matter how proud one may be, one feels humble and finds oneself small. In short, we will go to the sea."

Antispasmodics for Syncope

The Count says that the powerful medicines he uses are not poisons "since, in medicine, the most violent poisons become health-giving remedies when they are used properly." He explains that the medicine is an excellent antispasmodic, which he occasionally used with all possible caution himself. Madame de Villefort then indicates that she is extremely nervous and inclined to fainting, but because she doesn't have an excellent medication like his, she is obliged to go on using "Monsieur Planche's antispasmodic." The Count offers her some of the medication,

cautioning, "one drop of it restores life, as you've seen; five or six drops would kill infallibly. It is all the more dangerous because if those five or six drops were mixed in a glass of wine they wouldn't change the taste of it at all." With that buildup, one is not surprised when she later goes on a rampage of poisoning those around her.

The Stroke of Monsieur Noirtier de Villefort

One of the most interesting syndromes described by Dumas, long in advance of its description in the medical literature is an unusual form of stroke. There is a long conversation between the Count and his friend Villefort about the nature of apoplexy and how it can destroy you in seconds when a blood vessel ruptures in your brain. Villefort asks the Count to visit his father who has had a terrible stroke which must be God's justice, the common notion that illness is visited on people for their sins.

Locked-In Syndrome

When we meet Monsieur Noirtier he is seated in a wheelchair where he is placed in the morning and lifted out at night. He is paralysed except for the movement of his eyes, and can communicate by blinking or other eye signals. Three individuals are able to understand his method of communication, and he can dictate, and even change his will, by blinking yes to the correct letters when they are listed A - B - C - D. Closing one eye means he wants to see his grand daughter Valentine, and the other, his servant Barrois.

This condition has been well described only in recent years as the locked-in syndrome, appearing over a hundred and twenty years after Dumas in a publication by Plum and Posner in 1966 and only given attention after the report of Nordgren in 1971. It was called variously the locked-in syndrome, akinetic mutism, and the lovely term coma vigil. It has been suggested that the syndrome be called the Monte Cristo Syndrome. It's interesting that there is another early case described, but again it is by an author, the case of Madame Raquin in Emile Zola's *Thérèse Raquin* of 1868, 25 years after Dumas' description, and almost a century in advance of the medical reports.

Readers may remember the beautiful book *Butterfly and the Bell Jar* by the former editor of the European edition of *Elle* magazine, who became locked in after a stroke and blinked each letter of the book just as Dumas described.

Tolerance to Poisons

At one point the Count is mistaken for a physician because he cures the valet of a fever, and the hotel keeper of jaundice. He explains that although he is not a doctor, he has made a thorough study of chemistry and the natural sciences, and uses the technique of developing tolerance to poisons by taking it in increasing doses. Although protective, such poisons can also be a weapon and can produce symptoms that the doctors will misinterpret as other diseases.

The Poisonings

People in the Nortier household begin to die of a horrible acute illness. Dumas gives very accurate descriptions of the lethal and the sublethal reactions to brucine and

strychnine poisoning, as detailed as one would find in a modern textbook. One after the other die in extensor convulsive spasms, except those who had been taking protective daily doses of the poison, who become ill but recover. The family doctor is a clever fellow and not fooled, recognizing and using his chemical tests with nitric acid and litmus to identify the poison brucine. His reaction is interesting as he is said to experience the horror of a judge finding the awful truth, but the delight of a scientist unravelling the puzzle.

The poison brucine plays a central part in the story. The alkaloids brucine and strychnine are found in *nux vomica*. Brucine is a less powerful poison but they poison in the same fashion by suppressing inhibition in the nervous system. *Nux vomica* is a term for the seeds of a tree native to India, *Strychnos nux vomica*. From the 16th century to recent years it was used as both a medicine and as a rat poison.

The Count keeps Valentine in an opium coma so that it will appear that she is dead, and is described in what we would recognize as autonomic nervous system suppression. When he is about to administer another dose of his medicine she awakens and asks, "Are you a doctor?" and he answers, "yes, and the best one you can possibly have at this time, believe me" and offers her more of his medicine which brings down her fever and calms her brain.

The final scenes include fainting, fits of hysteria, further poisonings, attempted suicide and suicide, a psychotic attack, starvation, torture, hair turning white under stress, and one grand pharmacological display by the Count in a *Romeo and Juliet*-like scene where he has the young woman in a death like trance. When her lover thinks her dead, he attempts suicide. But the Count saves him, and puts him into a drug trance and when they both awaken they are re-united.

These dramatic pharmacological flourishes give moments of great excitement, and again show the Count acting like an overenthusiastic but powerful, knowledgeable physician able to use his medicines, his knowledge and his craft to control life and death, often playing in the narrow region between the two.

LEARNING MEDICINE IN THE ROOMS OF DR. THIBAUD

I think you can see how much clinical, anatomical, toxicological and pharmacological knowledge Dumas used to construct the elements of plot. I now return to the question of where he obtained the medical information for his novels. We have records and autobiographical notes on his interest in medicine. We also know of his visits to mental institutions to view new attempts at therapy. It is unlikely that he would have acquired this knowledge from a young medical student, Alexandre Bixio, that he met on the barricades in a revolution, and who was his second in three duels, even though Bixio wrote on medical themes in one of Dumas' newspapers.

Examining the list of his many collaborators who provided him research and plot outlines did not reveal any with a medical background. For instance, Auguste Maquet, who collaborated on *The Count of Monte Cristo* and *The Three Musketeers*, was a professor of history. The answer is in Dumas' autobiography which makes it clear that he learned medicine from a Dr. Thibaud¹.


Goethe in his famous comment on the arts said that romanticism was sickness and

classicism was health. In 1823 when Dumas met Thibaud, it was fashionable to suffer from chest complaints. Consumption was common, and for some reason, it was said to be particularly an illness of young poets. Dumas wrote, "It was considered good form to spit blood after each emotional upset and die young, preferably before 30. Of course Adolphe and I, being tall and very thin, considered we were entitled to indulge ourselves too." The tall and lean lads, Dumas and Adolphe de Leuven, looked and acted the part of consumptives, coughing into handkerchiefs, and enjoyed strutting about faking the appearance of dying poets. They learned of a young physician, Dr. Thibaud, a recent graduate of the University of Paris, who had few patients as yet, and decided it would be a lark to visit him in their role as poet-consumptives. Thibaud recognized their game easily and they later became good friends, even after they admitted they couldn't pay him. Dumas became fascinated with Thibaud's knowledge of medicine and returned nightly to Thibaud's rooms to take informal lessons in all aspects of medicine. There they studied physics, chemistry and the clinical and pharmacological nature of poisons. Thibaud would also take him to the hospital, but Dumas said he could never get used to the corpses and the operations. Thus, the novelist acquired his medical and surgical knowledge which he used in his writings for the next 30 years. In his autobiography 30 years later he added, "I owe much to Thibaud for teaching me method in working as well as actual knowledge."

Following a career of amazing and dramatic variety, Dumas lived in his Chateau Monte Cristo, dressing in oriental costumes and surrounded by "a carnival of starving artists, predatory actresses, playmates of the moment and unclassified parasites." He died famous but depressed by the fear that his writings were of little value. It has been suggested that he died of syphilis, contracted from Lola Montez, dying with "paralysis of his brain and limbs."

CONCLUSION

In conclusion, Dumas learned medicine at the feet of a physician, taking this as seriously as any medical student, but always with an eye to how this information could play a role in his writing. Medical themes and medical twists are common in literature, but the *Count of Monte Cristo* is unusual in its extensive use of such themes, its accurate depiction of disease and symptoms, with some observations that predated the medical literature by over a century. But at the end of some 15 years of study, I am still left with the tantalizing diagnostic puzzle of the disease suffered by the Abbé Faria.

¹  1 See *My Memoirs*, translated by A. Craig Bell, London, Peter Owen Ltd., 1961, chapter XCIV.