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SPECIAL ARTICLE

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Lessons from a geriatric clinical case from the 19th century: a bridge to modern geriatric medicine

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Abstract

Count Neipperg (1775–1829), the morganatic husband of Maria Luigia of Habsburg, Napoleon's former wife, presented with typical heart failure symptoms and died of bilateral bronchopneumonia. Neipperg's case is an example of the conflict in the medical field, which led to the birth of modern evidence-based medicine (EBM), and although Neipperg died almost 200 years ago, his case presents the same critical issues that more complex geriatric patients face today. First, the attending physicians provided divergent opinions without reaching an agreement. For example, Francesco Rossi correctly diagnosed heart disease by evaluating the patient's signs and symptoms, a clinical approach that is an early example of modern EBM. By contrast, Giacomo Tommasini made a misdiagnosis based on the philosophical principles of John Brown's vitalist theory, as reworded by Giovanni Rasori. Second, Tommasini's medical report also includes evidence of the Geriatric 5Ms for older patient care, such as multi-complexity, multimorbidity, medication, mobility, and the mind. Moreover, both physicians considered "what matters most" for the patient and his family. Third, the Count's status and political role were identified as the social and structural determinants of health (SSDoH) and used to justify the exceptional intensity of the health

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care provided. Subsequently, the ante litteram application of EBM and a clinical evaluation based on Geriatrics 5Ms principles anticipate current multidisciplinary management focused on the patient rather than a single disease. The systematic revision of past clinical cases not examined before could open new windows in the dissemination of the geriatric methodology and discipline.

KEYWORDS

evidence-based medicine, geriatric clinical case, geriatrics 5Ms, patient-centered care, social and structural health determinants

BACKGROUND

Modern Geriatrics now routinary employs an approach to care based on the principles of evidence-based medicine (EBM), 5Ms, as well as social and structural determinants of health (SSDoH). EBM represents the change in patients care, implemented with the advent of clinical trials since the second half of the 1900s. This critical step allowed to move from the "context" of intuition, non-systematic clinical experience, and pathophysiological rationale to the need of examining the clinical research evidence as essential determinant of clinical decision-making.[1] Nevertheless, the application of this methodology, occurred at least a century and a half earlier, allowed the transition of medicine based on philosophical elements, to the one founded on clinical evidence. Geriatrics 5Ms (Multi-complexity, Mind, Mobility, Medication, and What Matters Most) concept,[2] devised by Tinetti et al. and disseminated from 2017, is inspired to the biopsychosocial model and provide the core competencies for the comprehensive care of the older patient. SSDoH are environmental conditions can affect the health status, quality-of-life, and lifespan of the patient.[3] This complex clinical approach has taken centuries to evolve and can be found in the clinical case of a "geriatric" patient who lived between the late 1700s and the first half of the 1800s.

Count Adam Albrecht von Neipperg, born in Vienna on April 8, 1775, was a soldier in the Hussar Regiment (Figure 1) who participated in wars against revolutionary France. In August 1821, he became the morganatic husband of Maria Luigia of Habsburg, who was the daughter of Francis I, Emperor of Austria; Napoleon Bonaparte's former wife, and subsequently, the Empress of the French from 1810 until 1814; and from 1816, the Duchess of Parma, Piacenza, and Guastalla.[4,5]

Key points

- The geriatric clinical case of Count Neipperg is important in the history of medicine and is an example of the paradigm conflict, occurred during the first half of the 19th century, that led to the birth of modern evidence-based medicine.
- This "older patient" underwent a multispecialist evaluation based on the 5Ms of Geriatrics, the cornerstone of modern Geriatrics.
- The status and political role of Count Neipperg and his consort, Maria Luigia—the social and structural determinants of health—explain the exceptional intensity of care provided.

Why does this paper matter?

The Count Neipperg case from almost 200 years ago presents critical issues still prevalent in more complex geriatric patients. Although these patients require evidence-based medicine, they also benefit from the Geriatrics 5Ms approach. The case demonstrates (1) the conflict that led to evidence-based medicine (i.e., the conflict in the approach application), (2) the effectiveness of an approach similar to the modern 5Ms of Geriatrics, and (3) the impact of the social and structural determinants of health.

THE COUNT'S MEDICAL HISTORY

Neipperg's medical history is illustrated in Figure 2. The first medical reports were related to the Count's battle wounds during campaigns against French troops.[6] Between the end of September and the beginning of October 1828, on his way back to Italy after a journey to Vienna, the Count experienced progressive shortness of breath, followed by paroxysmal dyspnea and orthopnea.[7–9] Many of the most popular and respected physicians initially visited him and provided discordant opinions. Quinine was initially prescribed based on the belief that a periodic disease caused the symptoms.

FIGURE 1 General Adam Albrecht Neipperg's portrait. Giovan Battista Callegari (Parma, 1785–1855). *Source*: Parma (IT), Museo Glauco Lombardi. © Museo Glauco Lombardi.

The patient was also subjected to bloodletting and leech applications to reduce dyspnea, and the physicians prescribed Bacher pills (based on black hellebore extract) and squill extract to reduce dropsy (see Supplementary Table S1, which lists all treatments). A diagnostic hypothesis of a periodic disease was also given by surgeon Dr. Francesco Rossi (1766–1841), an Academy of Sciences of Turin member, who visited the patient at Agliè Castle (Turin). Therefore, Dr. Rossi agreed to continue the quinine therapy and prescribed valerian as ex juvantibus therapy: "*j'ai cependant jugé util d'y joindre de la Valeriane afin d'expier la nature si par hasard quelque affexion nerveuse prenait aussi part dans les accès*" ("However, I found it useful to add Valerian to assess the nature in case some nervous affection would also have taken part in the access").[7]

By observing the patient's signs and symptoms, Dr. Francesco Rossi altered his hypothesis about the cause of the disease. Ultimately, he was diagnosed with nonreversible cardiac disease, and discontinuation of quinine was recommended; however, a third physician's opinion (Dr. Gili) regarding the use of quinine was required. Initially, Dr Rossi prevented Count from returning from Turin to Parma, as mentioned in his handwritten letter. He considered the trip too dangerous because of the patient's severe clinical condition and left the decision to his wife, Duchess Maria Luigia. A few days later, upon the Duchess's request, the surgeon complied at last with the patient's wishes, allowing him to return home despite his critical health condition: "*et comme le malade ne desirait que de partir, sans quoi il allait tomber dans une profonde mélancolie, dont les effets nuisibles auraient été beaucoup plus graves que ceux, qui pouvaient en resulter par le voyage*; *j'ai conseillé le depart promptement*" ("As the patient only wanted to leave, otherwise he would have fallen into a deep melancholy, the harmful effects of which would have been much more serious than those which could have resulted from the journey, I advised him to leave quickly").[7]

Subsequently, Dr. Giacomo Tommasini (1768–1846), a famous Parmesan physician, treated the patient until his death, maintaining a daily clinical diary.[10] Dr. Tommasini formulated a different diagnostic hypothesis: in his opinion, the disease's cause was a "pathological condition" secondary to a "previous inflammation".[10,11] According to the vitalist theory formulated by Dr. John Brown (1735–1788) and revised by the Italian physician Giovanni Rasori (1766–1837), Dr. Tommasini believed that generic hyper-excitation from excess stimuli was the cause of the inflammation. Consequently, he assumed the usefulness of anti-inflammatory therapy based on remedies defined as counter-stimulants (able to remove stimuli), including bloodletting, antimonial remedies, digitalis, drastic purgatives, and gutta rubber[12] (Supplementary Table S1). Nevertheless, the patient's clinical condition remained serious; he was dyspnoic at rest, orthopnoic, and presented with a dry cough. Initially, Dr. Tommasini continued the ongoing therapy based on vesicants (blister agents indicated for skin and visceral inflammation), squill extract (indicated for lung phlegm in older people and dropsy), mineral kermes (hydrated antimony oxysulfide with an expectorant effect), and ammonia rubber (usually prescribed for chronic phlegm). He monitored the disease progression during its early stages and limited the increase in scillitic and antimonial doses. He was also prescribed potassium acetate,[10] indicated for dropsy.

On November 17, 1828, a medical consultation—attended by at least five physicians, including Dr. Francesco Rossi, Dr. Giacomo Tommasini, and Dr. Francesco Aglietti (1757–1836), a famous clinician from Venice—was held at the Count's bedside, but no agreement was reached.[7] Therefore, Duchess Maria Luigia, upon the Tommasini's recommendation, summoned Dr. Giovanni Rasori with the utmost secrecy.[13] Dr. Rasori believed that both previous diagnostic hypotheses (heart and inflammatory diseases) were incorrect and

TIMELINE		1793	1794	September-October 1828	November 1828	December 1828	January 1829	February 1829	February 22nd, 1829
Symptoms		NA	NA	Shortness of breath Paroxysmal dyspnea	+ Spasms	+ Fatigue	+ Chest oppression + Angor + Feeling of impending death	+ Angina pectoris	
Physical findings		Right arm battle wound	Multiple battle wounds Loss of right eye	Orthopnea Lower limbs edema	+ Episodes of fever + Irregular heartbeat + Cough + Haemoptoe + Diarrhea + Dehydrated stools	+ Upper limbs edema + Scrotal edema + Anasarca + Vomiting + Hypodipsia + Oliguria + Psychomotor agitation	+ Constipation + Lipothymic episode + Inappetence + Delirium + Fever + Faint voice	+ Purulent phlegm + Drowsiness + Hyporexia + Agonic state + Night gasps/apneas	
Doctor's diagnoses		NA	NA	Morigi, Nicola: periodic disease Rossi, Francesco: heart disease	Tommasini, Giacomo: inflammatory disease Aglietti, Francesco**: vessel disease Rasori, Giovanni**: "Counter-stimulus diathesis" Speranza, Carlo**: aortic arch defect		Rossi, Giovanni: Disease exacerbation due to north wind exposure		**Death**
Therapeutic approach*	**Prescription**	NA	NA	Bloodletting Quinine Leeches application Valerian Bacher pills Squill extract	Vesicants Mineral Kermes Ammonia rubber Potassium acetate Purgatives with Calomel or Aloe	Henbane extract Scillitic oxymel Colchic oxymel Arabic rubber solution with cherry laurel coobation water Digitalis purpurea Le Mort's tincture Ipecac Marte Aqueous tincture of myrrh Chelidonium majus Ether diluted in cordial water	Digitalis Juniper extract Laxative with gutta rubber Rhubarb extract Aconite extract Purgative with calomel Colchium spp extract Nitro (potassium nitrate) Cedar water Hoffmann's liqueur Bitter tincture Dough with mustard Quinine sulphate Stomachic tincture Extract of Arnica and Valerian Vesicants	Vinegar Ethereal or fetid mixture Arabic rubber solution Scillitic oxymel Antimonium salts	
	Deprescription	NA	NA		Quinine** Valerian** Bacher pills**	Vesicants Digitalis purpurea	Rhubarb extract Digitalis Aconite extract		

FIGURE 2 Timeline of Count Neipperg's medical history, listing symptoms, physical findings, attending physicians' diagnosis, and respective therapeutic approaches, in chronological order of appearance in historical sources. * Treatments are exhaustively listed in Supplementary Table S1; ** Unspecified date; NA, not applicable.

postulated that the cause of the symptoms was an asthenic disease according to the vitalist theory. Therefore, he recommended an unspecified treatment different from the ongoing anti-inflammatory treatment; however, his suggestions were not credited.[14]

Meanwhile, the Count still suffered from respiratory problems and was treated with bloodletting for the fever. The patient manifested dyspnea at rest, coughing, and a rapid, irregular heartbeat. Therefore, Dr. Tommasini prescribed henbane extract, which has calming, depressing, anodyne, and antispasmodic effects, in combination with an increased dose of the mineral kermes. Despite the use of leeches, the patient's clinical status remained unchanged and was complicated by a lipothymic episode. Consequently, in addition to the aforementioned squill extract, the Parmesan clinician prescribed scillitic and colchic oxymele (facilitating the release of pathogenic substances) for their diuretic effects. Despite the lack of response to the therapy, the patient did not change the overall treatment and only increased the dosage of some medications (squill, mineral kermes, ammonia rubber, and colchic oxymele).

Intercurrent alterations in bowel function and constipation, with "scant and dry stools," were treated with purgatives with calomel (mercury protochloride) or aloe and, occasionally, rhubarb extracts.

A handwritten diary by a subordinate person close to Neipperg describes his precarious clinical condition.[15] Additionally, the difficulties encountered by the attending physicians are supported by the correspondence between the members of the Ducal court and Dr. Francesco Rossi: "*Le Prof:s Tommasini et Aglietti sont toujours ici et ne savent plus que faire*" ("The Professor Tommasini and Aglietti [...] are always here, and they do not know what to do").[7]

During a respiratory crisis associated with cough and difficult expectoration, digitalis was prescribed and suspended several times owing to the onset of vomiting and bradycardia. There was also widespread use of remedies with revitalizing (cordial water) or tonic (Marte

FIGURE 3 Mask for the cast of General Adam Neipperg's face (A) and hand (B). Both bilateral Bichat's fat pad wasting (A) and left-hand edema (B) are evident in this image. *Source*: Museo Rocca Sanvitale, Comune di Fontanellato (Parma, IT).

preparation, rhubarb extract) effects. The dyspnea, associated with fever, cough, purulent sputum, and expectoration of "lousy material," progressively worsened; the Count developed inappetence and generalized edema; and on February 22, 1829, he died from respiratory failure in a cachectic and anasarcatic state (Figure 3A,B).[10]

The most relevant details concerning Count Neipperg's postmortem examination (Figure 4) were bilateral severe lung congestion with small round hardening areas of the parenchyma and cardiac hypertrophy with left ventricular dilatation and calcific degeneration of the valvular cusps and leaflets.[16] These findings suggest death caused by bilateral bronchopneumonia in a patient with already-established degenerative cardiac and aortic valve diseases.

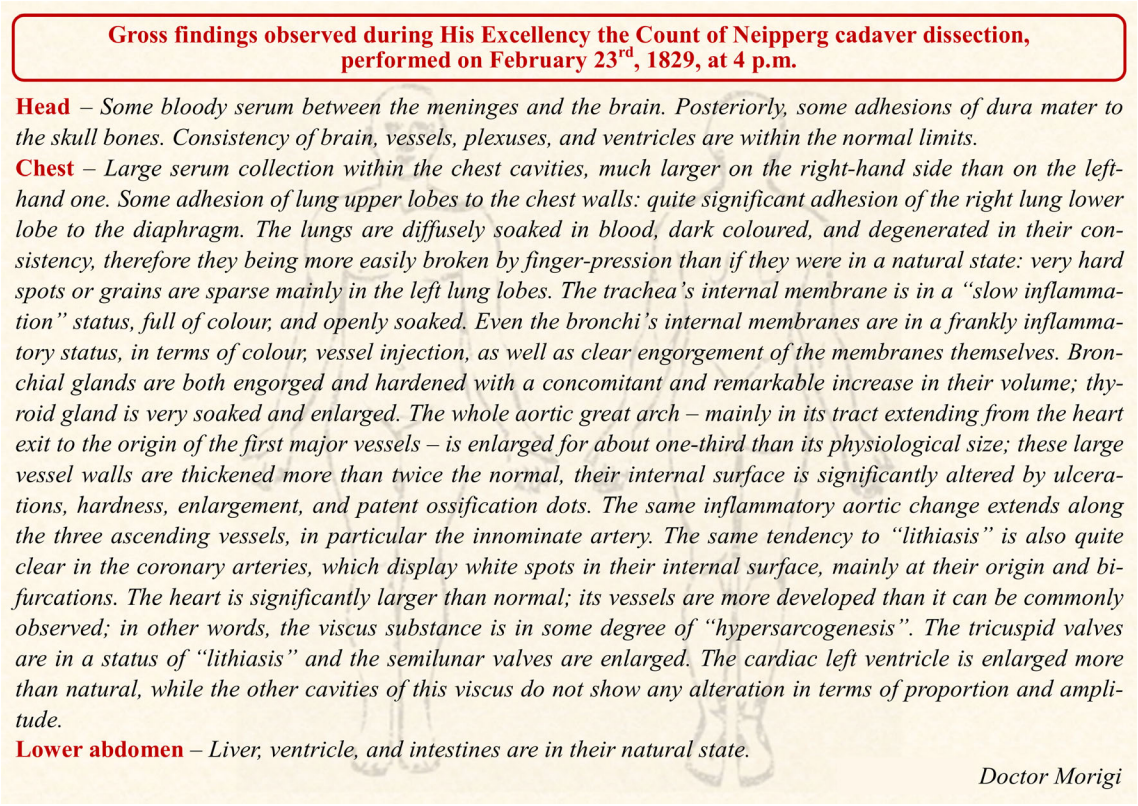
Count's medical history was retrospectively analyzed and discussed in a multidisciplinary team composed by geriatricians, cardiologists, pathologist, pharmacologist, botanist, and historians. The team investigated the potential application of the modern concepts of geriatric care to this clinical case. This novel and unexplored way of approaching the historical clinical cases was chosen to better understand: (1) the birth of EBM; (2) the presence in history of comprehensive and biopsychosocial framing of the older patient care, through the magnifying lens of the Geriatrics 5Ms; (3) the impact of SSDoH on the geriatric patient outcomes by looking at the historical context.

Finally, we also verified that revisiting the medical histories of "famous" older patients of different eras may improve the current approach to modern patients.

DISCUSSION

Count Neipperg's clinical case is important for a number of reasons. First, from a historical perspective, it demonstrates the type of conflict that led to the birth of EBM at the beginning of the 19th century. Almost all the attending physicians disagreed on the effective therapeutic strategy. However, the opinions of Dr. Francesco Rossi and Dr. Giacomo Tommasini deserve special attention. Dr. Rossi formulated the correct diagnosis and assumed that both paroxysmal dyspnea and leg edema were secondary to cardiac disease (left ventricular dilatation and aortic valve calcification were found on postmortem examination). Dr. Rossi's diagnostic assessment was based on observing the patient's signs and symptoms, also known as semiotics, which was still in the early stages at that time in Italy. This explains why, despite his role and means, Neipperg did not receive any evidence-based therapies except for the treatments prescribed by Dr. Rossi.

The second physician, Dr. Giacomo Tommasini, developed his diagnosis using dogmatic and a priori principles of theories permeated by philosophical speculations, the foundation of systemic medicine. Dr. Francesco Rossi was critical of systemic medicine[7] and issued, with the contribution of other colleagues of the Academy of Sciences of Turin, the contemporary theoretical guidelines based on experimental data to countryside colleagues.[17] Moreover, Dr. Rossi can be considered to be the forerunner of the contemporary EBM approach, as formulated in the late 20th century,[1,18,19] as he



Gross findings observed during His Excellency the Count of Neipperg cadaver dissection, performed on February 23rd, 1829, at 4 p.m.

Head – *Some bloody serum between the meninges and the brain. Posteriorly, some adhesions of dura mater to the skull bones. Consistency of brain, vessels, plexuses, and ventricles are within the normal limits.*

Chest – *Large serum collection within the chest cavities, much larger on the right-hand side than on the left-hand one. Some adhesion of lung upper lobes to the chest walls: quite significant adhesion of the right lung lower lobe to the diaphragm. The lungs are diffusely soaked in blood, dark coloured, and degenerated in their consistency, therefore they being more easily broken by finger-pression than if they were in a natural state: very hard spots or grains are sparse mainly in the left lung lobes. The trachea's internal membrane is in a "slow inflammation" status, full of colour, and openly soaked. Even the bronchi's internal membranes are in a frankly inflammatory status, in terms of colour, vessel injection, as well as clear engorgement of the membranes themselves. Bronchial glands are both engorged and hardened with a concomitant and remarkable increase in their volume; thyroid gland is very soaked and enlarged. The whole aortic great arch – mainly in its tract extending from the heart exit to the origin of the first major vessels – is enlarged for about one-third than its physiological size; these large vessel walls are thickened more than twice the normal, their internal surface is significantly altered by ulcerations, hardness, enlargement, and patent ossification dots. The same inflammatory aortic change extends along the three ascending vessels, in particular the innominate artery. The same tendency to "lithiasis" is also quite clear in the coronary arteries, which display white spots in their internal surface, mainly at their origin and bifurcations. The heart is significantly larger than normal; its vessels are more developed than it can be commonly observed; in other words, the viscus substance is in some degree of "hypersarcogenesis". The tricuspid valves are in a status of "lithiasis" and the semilunar valves are enlarged. The cardiac left ventricle is enlarged more than natural, while the other cavities of this viscus do not show any alteration in terms of proportion and amplitude.*

Lower abdomen – *Liver, ventricle, and intestines are in their natural state.*

Doctor Morigi

FIGURE 4 Adam Neipperg's autopsy report. *Source*: With permission of the Ministero della cultura–Archivio di Stato di Parma.

demonstrated (1) the integration of individual clinical expertise with the best available external clinical evidence; (2) a critical view of the authoritarianism represented by traditional and systemic medicine, affirming an independent assessment of evidence; and (3) decisions made respecting the patient's emotional needs.

Second, Neipperg's case is also relevant to geriatric medicine. Although the median age in Parma in 1829 was 49 years (after eliminating child mortality), the patient died at the age of 53[20]; thus, the patient could be considered an older patient for that time, and Neipperg experienced the typical symptoms of heart failure and other comorbidities. Episodes of cough with or without expectoration were compatible with exacerbated chronic obstructive pulmonary disease complicated by an infectious process (as evidenced by the presence of fever), which likely led to death from bilateral bronchopneumonia. Moreover, the patient probably had hypertension and dyslipidemia as causes of the ascending aortic atherosclerotic aneurysm found on the postmortem examination. Irregular heartbeat episodes could be secondary to premature beats or paroxysmal atrial fibrillation, and intercurrent alterations in bowel function and constipation have been reported, whereas oliguria is suggestive of renal failure, which is present in the terminal stage of the disease.

HOW THE COUNT'S CASE ILLUSTRATES THE GERIATRICS 5MS

If we analyze Neipperg's clinical case according to the geriatric areas of the Geriatrics 5Ms (Multicomplexity, Mind, Mobility, Medication, and What Matters Most),[21] we can consider it a typical multicomplex older adult case. The Count presented with end-stage disease, multiple chronic conditions, and complicated psychosocial needs related to his social and political roles. Additionally, several physicians cared for him, and some findings concerning other 5Ms, particularly medication, were detected in Tommasini's clinical diary. Neipperg required the administration of multiple herbal drugs, isolated minerals, and natural substances (Supplementary Table S1). There may be several reasons for the multiple prescriptions. The first historical origin primarily concerns Dr. Giacomo Tommasini, who used more than 50 remedies and followed Dr. Rasori's medical theory, according to which pharmacological experimentation was necessary because of the dynamic action of drugs.[22] The concomitant presence of these multiple diseases has led to the wide prescription of remedies, often administered simultaneously.

However, during the disease history, some drugs were discontinued due to a lack of clinical response or suspected intoxication, as in the case of digitalis, squill, and mineral kermes. At that time, to pursue prescriptive appropriateness, the side effects induced by the coadministration of different substances were not easily identified, and a prescriptive cascade was not avoided. From a pharmaceutical perspective, this case is also placed between two eras: an ancient one relying on uncharacterized raw plant materials and a modern one using single and purified compounds. Nevertheless, unreliable standardization was expected as both organic chemistry and modern pharmacies were in their very early stages. It is also plausible that an erratic response to medication is associated with frequent therapy.[23]

Dr. Tommasini also focused on patient mobility and the mind. He reported decubitus position changes, and Neipperg could ambulate 2 months after beginning his observation. Furthermore, the physician's cognitive concern emerges from the description of alterations in the state of consciousness, such as agitation, temporospatial disorientation, all potential signs of delirium, and drowsiness in the final stage. Another critical point of the case, namely "what matters most," is the attention paid to the wishes of the patient's family and how the attending physicians considered them; for example, the permission that Dr. Francesco Rossi granted to Neipperg to return from Turin to Parma, despite his clinically severe condition. Dr. Tommasini paid great attention to the wishes of Duchess Maria Luigia, who was very concerned about her husband's health and wanted a definite diagnosis. After the medical consultation, in which no agreement was reached, Dr. Tommasini suggested that she consult Dr. Giovanni Rasori. The physician gave the Duchess his suggestion even though she had previously prevented Rasori from returning to Parma due to an old ban for Jacobinism issued against him by the Bourbon Police.[13] In addition, the Parmesan clinician allowed bloodletting for relief at the request of the patient in the throes of breathlessness.[10]

Although his diagnosis was formulated according to philosophical theories and his treatment was not evidence-based, Dr. Tommasini's clinical assessment is dated almost 200 years ago but demonstrates the Geriatric 5Ms. All geriatric 5Ms are indicated as critical areas of care for older people, even though EBM is difficult to apply in this population due to systematic exclusion from randomized clinical trials.[24] Despite the exceptional level of care, the main challenge, namely a unanimous diagnosis among different physicians, was not achieved. The management of severe disease symptoms and multiple comorbidities is complex, and the result was the prescription of countless treatments: some harmful (such as antimony derivatives and colchicum extracts) and others potentially helpful (such as digitalis). However, none of these remedies improved the ominous outcome of end-stage heart failure complicated by bronchopneumonia.

Third, from the case analysis, it is possible to highlight critical SSDoH that may explain the exceptional intensity of care provided for the Count. The variety of treatments reserved for this patient by several attending physicians can be explained by the Count's social status and were most likely not accessible to the entire population. Neipperg held an important social and political role and was appointed by Maria Luigia as *Cavaliere d'Onore*, Superior Commander of troops, and in charge of foreign affairs for the Duchy of Parma, Piacenza, and Guastalla. His wife's concern determined the parallel intervention of multiple clinicians; nevertheless, despite the collegial evaluation held in Parma, this approach was ineffective because of disagreement between the attending physicians, the related lack of correct diagnosis and most appropriate treatment. Nevertheless, it can be considered pioneering in anticipating the multidisciplinary assessment required in modern medicine to address the demanding care of geriatric patients.

RELEVANCE TO MODERN GERIATRICS

In addition to the 5Ms, chronological and biological age, the social determinants of health status and care, the influential wife, and the occurrence of geriatric syndromes, including delirium and malnutrition, explain why Neipperg's case can be used to anticipate the existing challenges and dilemmas in geriatric medicine. Furthermore, it provides an important lesson: the need for a comprehensive approach to the multidimensional complexity of older patients, an issue well embraced by the Geriatrics 5Ms concept,[2] but unresolved 200 years later.

The main limitation of our work is the retrospective analysis of clinical data dating back two centuries. Despite this limitation, the certified provenance of the sources, their meticulous analysis and review in multidisciplinary team (geriatricians, cardiologists, pathologists, pharmacologists, botanists, and historians) enabled us to draw from these sources an extremely detailed clinical picture. In perspective, the application of this analytical approach, which was not previously adopted in the geriatric literature, for analogous historical clinical cases, may help to increase the awareness about the importance of the complex pathways that make fascinating the modern geriatric discipline.

CONCLUSION

Neipperg's case demonstrates the paradigm of the conflict in the medical field that led to the problematic birth of modern EBM. As a typical older patient, the Count required EBM but would have also benefitted from the expanded Geriatrics 5Ms multidimensional approach. Nevertheless, at the embryonic stage at that time, EBM was still an unsuccessful approach for this population because of the exclusion of complex older patients from clinical trials. This reinterpretation of this historical clinical case highlights the need for a multi-professional team that could have been useful for the Count. The era when the patient lived is a very interesting historical period, when medicine was facing the limitations and controversies of the decline of systemic medicine and the difficult rise of EBM. In this context, we should also acknowledge the complex balance experienced by the "old" Colleagues between the use of uncharacterized raw plant materials and purified and synthesized chemical compounds.

AUTHOR CONTRIBUTIONS

A.A. and M.S. contributed equally to this article and share first coauthorship. A.A. was responsible for the conceptualization, data curation, formal analysis, investigation, methodology, project administration, resources, supervision, validation, visualization, and writing of the original draft. M.S. was responsible for conceptualization, data curation, formal analysis, investigation, methodology, project administration, resources, supervision, validation, visualization, writing the original draft, and writing the review and editing. D.C. was responsible for the investigation, methodology, validation, writing of the original draft, writing of the review, and editing. F.S. was responsible for the investigation, methodology, validation, visualization, writing of the original draft, writing of the review, and editing. R.B. was responsible for data curation, formal analysis, investigation, methodology, validation, visualization, writing of the original draft, and writing, reviewing, and editing. E.F. was responsible for the investigation, methodology, validation, writing of the original draft, writing of the review, and editing. C.C. was involved in the investigation, methodology, validation, writing, review, and editing. I.Z. was involved in the investigation, methodology, validation, writing, review, and editing. U.L.P. was involved in the investigation, methodology, validation, writing, reviewing, and editing. C.T. was involved in the investigation, methodology, validation, writing, review, and editing. G.N. was involved in the investigation, methodology, validation, writing, review, and editing. F.L. was responsible for the data curation, formal analysis, investigation, methodology, validation, writing, reviewing, and editing. M.M. was responsible for the conceptualization, investigation, methodology, project administration, resources, supervision, validation, visualization, writing the original draft, and writing the review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest to declare.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

Data S1. Supporting information.

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Editor's Note: JAGS-1169 – A Clinical Case from the 19th Century

July 9, 2024

For readers who love history like I do, this is a wonderful article that I strongly encourage you to read. Our colleagues from Parma, Italy worked very hard to make this a compelling discussion of the relevance of a clinical case from the 19th century to modern day Geriatric Medicine. They masterfully weave in core principles of Geriatrics, including the application of evidence-based approaches to diagnosis and treatment, person-centered care, social determinants of health, and the 5M's of Geriatrics. They illustrate how the physicians for this very interesting historical character used different approaches to his illness, and encompassed all the core principles that we strive for in caring for our older patients in the 21st century. The figures and historical documentation of the autopsy report greatly enhance the case report. I hope you will enjoy this article, and I encourage more submissions like this.

Joseph G. Ouslander, MD