

Medical practice in the twenty-first century Challenges and rescue of the clinical method

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Abstract

Since its inception in ancient Greece, the clinical method has experienced no major changes in its components and application. However, for some time now, it has been infringed upon by the high impact of technology on the healthcare sciences, and the new paradigms imposed on clinical practice and medical education.

This article describes the most relevant historical data on the clinical method, its scientific components and its application in medicine, highlighting its importance in all medical aspects; and provides some thoughts on the reasons for this crisis and how it involves general medical practitioners in Colombia. (*Acta Med Colomb* 2021; 46. DOI: <https://doi.org/10.36104/amc.2021.1997>).

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Introduction

The goal of medicine, from its beginnings to now, has been to care for health and prevent disease, with a clear and constant focus on the patient's wellbeing, from a comprehensive (integrated?) perspective. This has been taught and practiced throughout the years by all those who decided at some point to serve others, as a calling. The practice of this art requires not only theoretical knowledge, but also the acquisition of certain skills to help in making a correct diagnosis and providing appropriate management of people's diseases.

The clinical method, understood as the application of the scientific method to the study of people's health-disease processes, was initially implemented by Hippocrates (460-370 B.C.), who contributed greatly to the separation of medicine from religion, also freeing it from the characteristic philosophical speculations of his time. One of the main contributions of this eminent physician in the establishment of what is now known as the clinical method was recognizing the importance of observation of the patient and the clinician's accumulation of experiences to enable him to accurately diagnose diseases, thus laying the foundation for the creation of the medical history. Galen (130-210 A.D.), born four centuries after Hippocrates's death, also made significant contributions to the field, authoring more than 500 books on medicine, and considered to be the founder of experimental medicine (1).

One of the first to understand the clinical method as a teaching strategy was Francisco Silvio (1614-1672), who

guided his students to learn medicine through interactions with patients at the public hospital. More recently, Sir William Osler (1849-1920) emphasized the importance of clinical teaching at the bedside, highlighting that this teaching is based on the patients themselves, not on textbooks without patients (2).

To speak of the clinical method itself, we believe it is important to mention the stages of which it is composed, stated as follows by Zerquera (3): 1) identifying and pinpointing the problem; 2) observing and seeking complete information; 3) formulating the hypotheses; 4) contrasting the hypotheses; and 5) confirming or rejecting the hypothesis. In line with this, Ilizástigui (4) proposes that infringement of the clinical method, in each of its phases, is inherent to physicians. In the first phase, due to not establishing an adequate doctor-patient relationship and not appropriately formulating the patient's problem or problems. In the second phase, due to carrying out a partial or incomplete interview and omitting, or inadequately performing, a physical exam. In the third phase, due to not formulating diagnostic hypotheses. In the fourth phase, due to not selecting appropriate clinical tests for the diagnostic hypothesis, not justifying these tests, not comparing the clinical picture with the complementary test results, and ordering complementary tests before taking a history and performing a physical exam. In the fifth phase, due to not recording the assessments made during each of the method's phases in the patient's medical chart, and not communicating the results of the method.

The purpose of this article is to provide a comprehensive approach to the problem of the current clinical method crisis, from the perspective of various authors who have given their opinion on the subject, as well as the authors' own opinions, following the four thematic axes proposed by Moreno (5): deterioration of the doctor-patient relationship, disdain for clinical assessment, overvaluing of technology, and lack of interest in primary care medicine.

Deterioration of the doctor-patient relationship

The doctor-patient relationship is based on necessary empathy between these two people, two human beings: the healthcare professional and the sick person. For empathy to exist, several elements must come into play, the most important of which is the doctor's interest in achieving the goal for which he/she prepared during long sessions: to find the cause of the problem and provide relief for the suffering, in the process gaining trust and credibility and providing peace of mind for his/her patients and their loved ones. For this, he/she must have sufficiently strengthened tools like knowledge, healthcare resources, sufficient time, clinical skills and humanity. The patient's contribution to this relationship depends on several factors which vary from one person to another. We see that even the most influential, powerful and arrogant people, when they are sick, become vulnerable and fragile, depending on and seeking someone who can give them the most valuable thing, for which they would give all they have: health.

Society constantly asks, "Why are doctors so inhuman, cold, hard, negligent?" and "Why is the fundamental right to health now a business in the hands of a few who get rich at the expense of others' pain?"

Let us begin with the principle that doctors, to achieve a good doctor-patient relationship, must have and feel moral and physical wellbeing, feel that what they do is valuable and necessary and contributes innumerable benefits to society. But what we find is that there is not enough time to greet the patients warmly, converse with genuine interest about their nuclear family structure and medical history, and even less, about conflicts in their work, sociocultural, religious, environmental and sexual-emotional surroundings. Trosseau repeated, for his pupils and posterity, a profound thought: "A doctor sometimes cures, many times relieves, but always consoles." (6).

We have lost the focus of our medical practice, of what we ought to be. We are no longer a support for the people who pass through our hands, because we have become employees in a manufacturing company. We think and believe that our duty is simply to give a diagnosis and fulfill the requirements of the company for which we work; that if we do not manage to balance the expense we are causing against the number of people we are seeing, we will be "punished," because we have been sold the idea of health as a business. Therefore, we start to see patients as objects rather than persons; we have

lost compassion and the capacity to empathize with suffering patients who have their hopes placed on the healthcare professionals, since they know that the system tends to only seek a financial benefit which they are the means to achieve. Thus, we cannot be patients' consolers; we stop being humanitarian and become healthcare executives. We arrive at our workplace, work our scheduled hours or shift, and at the end of the month, we receive a salary, some luckier than others, depending on the specialty or the luck of having found an employer with a "better hourly wage." We do not even have time to enjoy our families, the company of our coworkers, or the chance to drink a leisurely cup of coffee, because we are always racing against time, optimizing it in order to get home early or, in some cases, continue working at another institution, tired, exhausted and barely awake, trying to be completely aware in order to continue seeing more people in the least amount of time possible. How can a doctor have emotional stability, enough time, and the peace of mind to be able to empathize with people and thus understand their feelings, and be able to console those who have a mistaken expectation of the healthcare system? For they think it is the doctor who administers the system. Without going into other personal situations, it is worth noting that there are a few very rare exceptions in which the professional has never developed a love for medicine as a calling, and therefore would never be able to understand a patient, despite having the best working conditions.

It all begins during academic life, where we learn day by day from the experiences of graduate doctors, who become our teachers, and who in some cases have never studied pedagogy in addition to their medical studies. The doctor, therefore, is trained with a slave mentality, and is unable to take a different path than the one presented to him/her to achieve, at last, a degree in such a long and difficult career, and thus be able to give back to his/her family who has sacrificed in order for him/her to be able to study. Subsequently, the doctor repeats the learned behaviors in his/her clinical practice. For example, accepting contracts with no demands and having to compete for the "highest bidder," look for the places that offer the most time to see patients and where it will be easier for patients to have their necessary diagnostic tests or procedures authorized, where the doctor will have the benefits prescribed by law, and where salaries have been raised in the last few years, or at least where they pay on time.

We still have time to change, beginning in the universities, the perspective we have of the doctor's practice, of the doctor-patient relationship which is so important for truly efficient results, of being able to demand a change in Colombia's healthcare system which has been mistreating both doctors and patients for such a long time, because being doctors does not make us untouchable nor immortal, and we know that doctors in training will be our future attending physicians. In addition, it is time to take the reins and direct the changes in the healthcare system, because it cannot be left in the hands of other professionals who are unable to make correct deci-

sions as they do not understand the extent and dimension of our daily work in Colombia.

Disdain for clinical assessment

The clinical method is also defined as an expression of the application of the scientific method to the study of the individual's health-disease process, for which not only is knowledge needed, but also the acquisition of certain abilities to help arrive at an accurate diagnosis and appropriate management of human diseases (7). For centuries it consisted only of clinical assessment, until laboratory tests appeared. Since then, they have become completely integrated as they are not only complementary, but at times decisive in the diagnostic process (8). However, it is the clinical assessment which guides the laboratory, since it is the most rational way of acting, thus avoiding errors and wasted time (1).

The ideal profile of a medical professional should be based on knowledge, clinical abilities, humanity and responsibility, always focused on the patient, all of this due to the large role these professionals have had in society. In recent years, capitalism has assumed an important role in global development and has had some serious consequences on the area of healthcare teaching. The deterioration in the clinical method is explained by the way medicine is taught. The profile provided by medical academies is that of a technician enslaved to technology and a pawn of large, multinational for-profit companies, commercializing medicine, limiting medical practice, selling us the idea that the goal is money (invest to make more), abandoning the ideal profile that the community needs. In doing so, we forget to listen to the patients and investigate the reason for their problems, we forget that medicine is science and art at the service of man, and therefore the current image of a doctor is that of a merchant offering and selling his services at a high cost, but with little concern for his patient (6). This is the conservative model, with which most doctors are trained, and when a model does not solve most of the problems it should solve, it must be modified (9, 10).

It is important to remember that this conservative model began with the rise of technology; however, the great change in our country occurred with Law 100 of 1993, in which the government mistakenly decided, perhaps due to a lack of financial resources, to transfer healthcare to the private sector. This decision was made from a financial perspective and by economists, not by doctors with a medical perspective; from that moment on, healthcare in our country began to be commercialized (6).

With this model or ideology, the ultimate goal will be to recover the investment. The need is created to always pursue specialization and this derives into more and more subspecialties in order to accumulate knowledge and technology, but they continue to be clinicians because they use the clinical method as their base. Moreno said that there are four reasons why clinical assessment is disdained: its importance is not understood, it takes time, it does not generate a lot of money, and it is mistakenly thought that technology can replace it (5).

It is evident that these reasons explain much of the situation we face today, but a new reason could be added: the concept of "dehumanized" people and it might be, as Tamayo says, that they are not doctors who were humanitarian and lost that quality, but rather dehumanized people who studied medicine (11).

We must not forget that humanism is the essence of the physician. It is the component which distances him from the healthcare system's current limitations, all the way from his teaching to his practice. It can be applied with a good use of the scientific method, always keeping an excellent doctor-patient relationship in mind, which from the onset will be the condition for a good diagnosis (12).

Despite being completely aware of this problem for a long time, we, as our country's doctors, have not made decisions nor have we implemented strategies to improve the conditions of the general practitioner. On the contrary, irresponsibly, policies have been supported which, in a veiled way, purport to provide solutions. For example, the residents' law intends to provide payment during medical residency in our country, which is not bad, but ultimately it decreases the number of available slots provided by the universities, decreases the chances of being accepted in a specialization program, and further increases the interest in specialization, increasing the problem of finances and ego in the residents.

The student is sold the idea that if a doctor does not specialize, he will not be able to achieve status, nor be a valuable person within the profession. In addition, in some cases, specialists reject general practitioners due to economic, knowledge and work benefit disparities, which increases division within the profession. Coupled with this is the difficulty in being admitted to the various specialties (due to few university slots and corruption in some institutions, among others), creating a tendency towards frustration and depression in medical work.

Overvaluing technology

Technology has advanced greatly in recent times, which has served not only as a complement to clinical assessment, but also as a tool for advances in teaching (11). As technology advances, medicine advances. Previously, clinical practice was based on experience; now, it is based on scientific evidence. Technology's contributions to the healthcare field have been great, for instance incorporating diagnostic aids, complementary tests, therapeutic resources and a deeper understanding of diseases (13, 14). When these technological aids began to be used in medicine, people went from being traditional clinicians to twenty-first century clinicians.

Despite all these tools which make it much easier to diagnose and treat patients, many doctors do not use a good clinical method, do not take a good history, do not examine the patients and believe that the diagnostic aids or paraclinical tests will provide the diagnosis when, clearly, this is not the case; they are only aids which help to confirm or rule out a diagnostic suspicion (16). This sometimes leads to treatment failure, and patients losing their belief in medicine and looking

for other alternatives which may provide more relief; in lucky cases, they find a doctor who listens to them and begins his scientific method from the ground up, a doctor who, with the proper skills, helps the patients solve their problems.

The arrival of this technology in medicine also led to the creation of several paraclinical specialties, since certain knowledge is needed to be able to use and interpret them. The misuse of diagnostic aids has occurred for a long time, since the 90s. Hinich said: “The modern doctor, like a witch’s apprentice, has ceased to be technology’s master and become its slave,” (17) and Bernard Lown said: “The patient’s blood is on the way to the lab before we have finished talking with him and long before we have placed a hand on him.” (18) At that time, certain technological tools were just being introduced, and their misuse was already evident. The overuse of these tools has led to a loss of confidence in the history and physical exam, known as the clinical method (19).

Another association between medical care and the abuse of diagnostic aids is caused by the growth of medical malpractice lawsuits against professionals, as doctors prefer to order diagnostic aids which will give them a degree of confidence in ruling out diseases which could have been eliminated from the diagnostic hypotheses with the history, and which often end up being unnecessary. This is due to fear and the mental need for the security they may provide to the professional; in some cases, they also help prolong repeat consults, hospital stays, critical care stays, etc. At the same time, the opposite occurs with certain insurance companies which restrict and block the ordering of procedures and tests for patients who really need them. These are not authorized at the appropriate time due to costs, complicating the patients’ clinical picture and many times ending in death or irreparable sequelae.

Lack of interest in primary care medicine

One of the main characteristics of today’s medical practice, which has worsened the clinical method crisis, is a loss of interest in the knowledge and practice of general medicine and primary care. Many factors place the general practitioner at a disadvantage compared to other healthcare professionals, and Moreno (5) refers to some of them: lower economic remuneration, work overload and less free time, excessive limitations imposed by the insurance companies and the healthcare system itself, and discrimination at healthcare centers. All of this, coupled with many other conditions that may arise from the reader’s experience and imagination, make primary care medicine disheartening and unattractive for doctors in training who are close to embarking on the work world, and an inhospitable environment for the general practitioner already immersed in it.

The problem also lies in the spaces set aside for clinical teaching, in accordance with the current medical education model. High complexity hospitals and healthcare centers, with all the available resources and optimal conditions for professional practice, make up the vast majority of practice sites for training future doctors (20). This situation has contributed to

graduates, even in their early undergraduate stages, making the decision to specialize, deepening the disdain for general medicine even further and disregarding the importance of the first levels of care in the current healthcare system.

We should not forget that primary care medicine is really the basis of a healthcare system, especially in a country with such limited resources as Colombia. The coverage provided by a general practitioner, with a comprehensive knowledge of the broad spectrum of human diseases and unrivaled clinical reasoning, cannot and should not, under any circumstance, be assumed by a specialist and much less by a subspecialist. General medicine and primary care medicine are of incalculable worth, which should be recognized and strengthened, in sustaining and prospering any healthcare system; and play an extremely important role in giving new meaning to the clinical method, which appears to be vanishing from our reality at a dizzying speed.

Primary care is the key to a productive, coherent, efficient and timely healthcare system but, unfortunately in Colombia, it does not have a solid base; it is not the strong point of the healthcare educational system, nor does it receive sufficient investment from the healthcare companies. If it were given its true importance and were taken as the axis of healthcare services, it would have a long-term effect which would help sustain a more vital and healthy population, stretching the resources invested and lessening the consequences of only treating long-term diseases.

Final thoughts

Ever since our student days and, even more, now as clinical professors in medical schools, we have seen a change in the profession’s vision and practice. It has always been considered a true ministry, but the current conditions added to the regulations, demands, excessive information, and working conditions, among many other situations, have led to expectations and aspirations changing into frustrations and fears which have blurred the real medical work.

The world changed and, perhaps, we as physicians were not prepared to face these new challenges. There is no doubt that, as physicians, we surely know about medicine, but it is an increasingly impersonal knowledge, without the depth or humanism we have proclaimed and with an, unfortunately, frequent dependence on technology.

These thoughts are intended to try to rescue what is perhaps the oldest tool, which in turn constitutes the basis and foundation of the medical sciences and is the most important training object for learning, stimulating and capacitating in the necessary skills for practicing in a human and assertive way: the clinical method.

It must be remembered that medicine’s fundamental purpose is a commitment to the suffering person, dealing with the suffering with the aim of at least helping to make it more bearable, according to the ancient phrase: “The doctor rarely cures, sometimes relieves, but always comforts” (*Guérir quelquefois, soulager souvent, consoler toujours. Ambroise*

Paré). We must measure up to this need. It arises precisely at one of the most difficult times in the modern era, in the midst of a pandemic which has brought humanity and the doctors and healthcare personnel on the frontlines of “the battle” to their knees, with a large number of colleagues who have died in the selfless fulfillment of their work.

But let us return to what concerns us. The medicine that tries to solve the particular problems of human beings, and is committed to the patients and their families, has been set aside and replaced by one that is often required by healthcare administration entities, the loss of autonomy, greater interference in decisions, employment insecurity, the very fear of being immersed in legal and, frequently, ethical problems, leading to a growing need to fill the lack of clinical examination with complementary tests, often motivated by a lack of time as well as the fear of possible malpractice lawsuits.

The undoubtable advances in today’s medicine cannot be denied. The development of new diagnostic and therapeutic alternatives, transplants, stem cells, genomics, and so many other possibilities which have broadened our understanding in ways we never would have imagined are not compensated with a more satisfying medical practice. On the contrary, we believe that, despite all this, and possibly because of all this, we help foster a growing dissatisfaction in patients and doctors, in which statistical results, coverage and other measures are more important than real wellbeing.

One of the things we remember a lot from our student days is that one of our guiding principles was to recognize medicine “as art and science.” Clearly, the technological field has developed as never before over the last 50 years, but in medical education we are called to recover the teaching of a more human medicine, under the current demands of science and technology. There is an indisputable need to be up to date to avoid the risk of becoming obsolete and sidelined professionals, and we must maintain the focus of a complete and humanized clinical practice. The invitation is clear: to make our profession an ever more honorable practice, help patients in a multidimensional way, learn from them, and solve their problems with the right balance in our practice. Thus, it is common for doctors to see patients as an opportunity for acquiring more knowledge while at the same time helping them solve the problems they are dealing with. The challenge is to achieve the right balance.

The contribution of higher education (universities and medical schools) is to offer the opportunity to acquire the clinical and communication skills and abilities needed both with patients and their families as well as with the other healthcare professionals, understand the fundamental aspects of diseases, carry out basic procedures, and plant a seed which will motivate the person to maintain his abilities and update his knowledge throughout all of his professional life.

Medical teaching before was based on the patient’s history and physical. It was based on the individual himself, who exchanged first-hand information with his doctor and, if this was not possible, did it at least with a relative or close

friend. Thus, this way of practicing medicine maintained a high level of personal interaction, where not only the patient’s symptoms were of interest, but hopes, aims, goals and fears were shared, since the doctor had always shown both his ability as well as his willingness to listen to the patient. Sacrifice and commitment were recognized, with the ideal of helping a fellow human being.

As we were saying, the healthcare system has a normative objective: to ensure healthcare services for a large percentage of the population, all as an integral part of people’s rights, but through an almost impersonal setting in which the end product is health, through minimal interaction between the doctor and his patient, and at the lowest possible cost. This leads to the doctor-patient relationship being distant and cold; so much so, that often the doctor does not even know his patient’s name, or maybe only knows his medical history, which is why he ends up referring to the patient by his diagnosis, bed number and even by his behavior towards the healthcare staff (“tiresome patient”).

We have reached the extreme in which technology so dominates the medical setting that even the patients themselves are wary if their doctor does not obtain the diagnosis through sophisticated equipment and complex studies. Thus, they themselves often demand that these exams be performed, or they will recur to the legal resources available to them with the pretext that if they are not performed, their rights are being denied. Now, patients have no reason to know this, but we doctors should highlight the fact that the medical act begins with the practice of clinical assessment: an appropriate history, a complete physical exam and exhaustive reasoning using the clinical method in each patient. The mental process itself is very relevant to the diagnostic process, and not just the goal, that is, the diagnosis.

Every doctor should remember that complementary tests are exactly that: a help. However, it seems that we depend more and more on a laboratory or imaging result to determine the diagnosis. This explains the exponential growth in the ordering of studies which the healthcare system is facing today, and the inadequate response of medical practice, ordering tests indiscriminately merely in a defensive attitude against possible lawsuits. If the clinical method can be carried out assertively with each patient, a greater diagnostic approximation is plausible along with a rational use of complementary tests.

But in our practice, the social security systems do not always allow this. If a doctor spends too much time with a patient, he is not profitable, he does not meet the goals and thus, is not aligned with the organization’s objectives; in other words, he is not useful for its interests. It would seem that these systems seek to meet the requirement for quantity but not necessarily quality care.

Thus, the doctor ends up falling into routines in his practice, working quickly and, of course, poorly, with a final result vastly different from what is needed. Hence, he ends up becoming a distant, bored, dissatisfied person with little commitment to his patients.

Now, is the healthcare system solely to blame? Obviously not, because the doctor also contributes to making the healthcare system's problems more evident. As his work enters a period of tedium, of routine practice, it ends up deteriorating his professional performance.

In fact, it has become commonplace for the medical act to be judged, for third parties (auditors, administrators, other intermediaries) to become involved, for there to be a growing aggressiveness in patients and, especially, in family members, and for there to be a feeling that medical practice is responsible for producing a result (which is impossible, since a given result cannot be guaranteed), all of which has made medical practice a high risk activity.

If we add to this the fact that many doctors must work at several different places to obtain a halfway decent income, due to types of contracting that give precedence to contract labor without benefits and without overtime or extra pay for holidays/late shifts, this situation is dramatic.

We are left then with this reflection, born of years of experience both as a teacher as well as in practice in various medical fields. With this, we hope to contribute to a reconsideration of medical training which will give precedence to humanism over technicism and which, in the future, will help recover the art in medicine (21, 22).

References

1. **Hernández JC, García PH, Gobel ND, Dueñas AS.** Importancia del Método Clínico. *Rev Cuba Salud Publica.* 2012;38(3):422-37.
2. **Giannasi S.** La enseñanza clínica: el caso de la recorrida de sala. *Rev del Hosp Ital Buenos Aires.* 2012;32(3):121-6.
3. **Zerquera CE.** Un llamado a la aplicación del método clínico en la práctica de la medicina perinatal. *Medisur.* 2010;8:174-6.
4. **Iizástigui F, Rodríguez L.** El método clínico. *Medisur.* 2010;8(5):2-11.
5. **Moreno MA.** Crisis del método clínico. *Rev Cuba med.* 1998;37(2):123-8.
6. **Vera, A.** Humanismo y medicina, y algunas reflexiones pertinentes. 2004;11(6):270-6.
7. **María L, Ledo V.** La enseñanza de la Clínica. 2005;19 (2).
8. **Bacallao GC, Bello B.** El método clínico, situación actual. Revisión bibliográfica. *Acta Médica del Centro.* 2014;8 (2).
9. **Kuhn T.** La estructura de las revoluciones científicas. 8va edición. Argentina: Fondo de cultura económica; 2004.
10. **Cuba M, Contreras Samamé JA, Ravello Ríos PS, Castillo Narro MA, Coayla Flores SA.** La medicina centrada en el paciente como método clínico. *Rev Med Hered.* 2016; 27:50-59.
11. **Pérez R.** Humanismo y medicina. *Gaceta Médica de México.* 2013;149:349-53
12. **Mendoza M, Yourcenar M.** Reflexiones sobre humanismo y medicina. 1998;23:3-6.
13. **Rodríguez Weber FL.** La enseñanza clínica, un reto de nuestro tiempo. *ACTA MÉDICA GRUPO ÁNGELES.* 2017;15:3
14. **Moreno MA.** La contrastación. En: *El arte y la ciencia del diagnóstico médico. Principios seculares y problemas actuales.* La Habana: Editorial Científico-Técnica; 2001. p. 144-66.
15. **Lifshitz A.** Un clínico en el siglo XXI. *Gac Méd Méx* 2007;3:279-283.
16. **De la Osa JA.** Médico moderno: de amo de la tecnología a servidor. XI Congreso de la Asociación de Medicina Interna de Centroamérica y el Caribe. 2013
17. **Hinich H.** Triunfos y fracasos de la medicina en los Estados Unidos. *Gac Med Mex.* 1990; 12: 72-6.
18. **Weatherall J.** Crisis of communication: the lost of healing. *Br Med J* (ed. Latinoamericana). 1997; 5:287.
19. **García RD.** El método clínico en la Atención Primaria de Salud: algunas reflexiones. *Medisur.* 2010; 8:5:144-155
20. **Lifshitz-guinzberg A.** La enseñanza de la clínica en la era moderna. *Investig en Educ Médica.* 2012;1(4):210-7.
21. **Duarte J.** Acerca de la necesidad de que los médicos aprendan medicina *Med Int Méx.* 2018;34(2):304-310.
22. **Solis U, Valdés JL, Calvopina S, Martínez JP, Flor Mora OP, Menes Camejo I.** El método clínico como pilar fundamental en la enseñanza médica. *Rev Cuba Reumatol.* 2018;20(1):1-7.

