# Clinical Examination and Unnecessary Additional Examinations: A Review Article

Murilo Guarino Carneiro<sup>2</sup>, Victor Campos de Albuquerque<sup>1</sup>, Vicente Clinton Justiniano Flores<sup>2</sup>, Dalida Bassim El Zoghbi<sup>2</sup>, Leticia Vezneyan Povia<sup>2</sup>, Willian Guimarães Santos de Carvalho Filho<sup>1</sup> <sup>1</sup>Student of Piaui State University, <sup>2</sup>Student of Santo Amaro University

Abstract:- Despite the advantages that new technologies can bring, it has been observed that these new tools can contribute to over-prescribing unnecessary medications and treatments. Currently, contempt for the physician's clinical and intellectual capacity has increased and evidence-based medicine, medical guidelines, and large randomized studies have been valued. Despite the increasing aid of technology in medicine, the number of lawsuits for medical failure has increased, with diagnostic errors and technical failures being the most recurrent causes. Clinical examination and anamnesis can never be considered inferior to complementary exams. A good history and clinical examination are still unsurpassed since when performed properly they can reduce by more than half of complementary exams. Thus, in order to avoid over-examination requirements and financial resources to be spent more efficiently and effectively, medical expenditure management should not only focus on reducing costs, but should be the basis for better distribution and use of available resources, so that greater organizational effectiveness can be achieved and this reflects in improving the quality of health care of the population.

*Keywords:-* Anamnesis, Physical Examination, Unnecessary Examinations.

# I. INTRODUCTION

The doctor-patient relationship is complex and goes far beyond a simple assessment of the clinical condition and treatment of the diagnosed disease. With the increase in technology and the association of these as adjuvants to decision making and diagnostics, significant increases have been achieved in the early and accurate collection of data and information that can assist in the discovery of diseases and the closure of diagnoses. However, despite the advantages that new technologies can bring, it has been observed that these new tools can contribute to overprescribing unnecessary medications and treatments.

Decision making is a way in which the trader will choose the one that seems most appropriate among others. This is based on a data and information structure that the individual making the choice has so that they can choose the most efficient and most likely to succeed. In the medical clinic, the decision is made by applying the theoretical and practical knowledge of the professional. The semiology is a tool that allows this to occur, being formed by physical examination, history, and complementary exams, the latter has gained a lot of strength in recent years by increasing the incorporation of technological means aimed at increasing accuracy and reducing uncertainty in the supply of data to health professionals. Today, there has been increasing disregard for the physician's intellectual and clinical capacity and the appreciation of evidencebased medicine, medical guidelines, and large randomized trials. This event is confirmed by clinical studies addressing more sharply how doctors should make choices using algorithms rather than analyzing how these professionals make decisions in their daily lives.

Despite the increase in aid of technological medicine has increased the numbers of cases per medical failure and errors in diagnosis and technical errors the most frequent causes. This is an indication that professionals have been lacking the appreciation of decisions based on clinical practice and the highest appreciation of this since in universities, clinical examination and anamnesis can never be considered inferior to complementary exams, the physician should use them as a compliment. of support in their decisions, considering that there is no individual like the other. Thus, the purpose of this review work is to show the importance of valuing the clinic over the complementary exams and thus showing that this can lead to the reduction of medical errors and greater effectiveness in the choices made by these professionals.

## II. METHODOLOGY

This study was carried out a literature review, with publications of research at the site of Bireme, including base data as SciELO, Medline, Lilacs, Medline, Cochrane, and IBECS. For keywords, we used the terms: "anamnesis", "physical examination", "unnecessary examinations ". We found 119 articles. 32 works not presented the full text available on the search platform, and for this reason, have been eliminated. And there were repeated in the list generated by the site 20 articles, which were removed to avoid duplication in data consolidation. Of the 67 items left over, 39 were withdrawn by if rem essays, reports, reflection studies, technical reports, specific protocols for clinical care, prescription identification. In this way, reaching the 28 articles.

#### ISSN No:-2456-2165

# III. DISCUSSION

Physical examination and anamnesis are the fundamental tools the doctor has to evaluate the signs and symptoms of his patient. In the 70s, studies pointed to the need for a good clinical evaluation. In England, a survey showed that the only anamnesis was the source of 82.5% of the diagnoses made, physical examination and anamnesis by 8.75% and complementary examinations and physical examination by 8.75% [1]. Another work in the same country showed that history alone led to the diagnosis of 56% of ca s the, most physical history exam for 17%, while the rest were made based on medical history and laboratory tests. During this period, analyzed by this research, the patient, who arrived at the English hospital, underwent several exams considered routine and that in the vast majority of cases presented negative results and only increased the costs of the service. It was concluded that examinations should be ordered based on patient complaints and not a predetermined series of examinations for all patients [2]. In a study carried out in 1992 in the United States, it was pointed out that anamnesis alone led to 76% of diagnoses, a physical exam, and anamnesis to 12% and the rest for the performance of complementary and physical exams [3]. Another study, in 2000, indicated that anamnesis led to the diagnosis of 78.5% of cases, 8.2% of cases due to complementary and physical examinations and 13.3% of cases due to anamnesis associated with physical and complementary examinations [4]. Another study carried out in Brazil, at the University Hospital of the University of São Paulo, pointed out that the anamnesis led to the diagnosis in about 60% of cases, physical examination and anamnesis 25% and the others by the anamnesis, physical examination and Complementary [5].

In the preoperative evaluation of patients, the excess in the requests for complementary exams also occurs. One of the factors contributing to this is that there is currently no standardization for preoperative evaluation, which contributes to a high disagreement between different medical services and the request for minor preoperative examinations. A point of this to be analyzed is that the optional and random request of exams contributes to the increase of the expenses in the public and private health systems. Besides, the request for excess tests increases the likelihood that anomalies are found that are not clinically important but lead to further clinical investigation, further increasing costs, and may lead to delays in surgery and diagnosis, with low efficiency and without no effective discovery [6].

The need for a thorough preoperative clinical evaluation is unquestionable to discover and analyze the patient and thus perform the surgical procedure as safely as possible. Although there has been a great evolution over the last few years in complementary examinations to support medical decisions, a good history and clinical examination are still unsurpassed, since when performed properly they can reduce by more than half of examinations. before the surgical procedure [7]. Patients with no previous history of pre-existing disease, no symptoms, and under 50 have very low chances of complications [8]. Research shows that the likelihood of complications in the surgical process increases with age, from 1.3% of those under 60 in elective procedures to 11.3% in individuals over 80 and under 90 years.

A favorable organization began in the 1990s to implement a demanding scientific methodology for the study of diagnoses with analysis of data obtained from physical and anamnesis examinations. In 1992, a journal, the Journal of the American Medical Association (JAMA ), began a sequence of articles called The Rational Clinical Examination that addressed the specificities and sensitivities of various clinical examination and anamnesis information. It began with the article The Science of the Art of the Clinical Examination, in which its author [9] was one of the first to argue that physical examination and anamnesis are to doctors the primary and most important means by which doctors need to reach the diagnoses, since through them it is possible to discover patients who are still in the early stages of the disease and may die, as well as to eliminate clinical hypotheses. After 5 years of the publication of the first work, more than 20 other articles on the subject had been published, which despite showing the great success of the sequence, some authors report that they noticed a big difference between the investments in the publications about the importance of clinical examination and anamnesis in relation to the high investments that were made during the same time in the analysis and evaluation of complementary exams [9]. The purpose of this series was to look for data that were found in clinical and relevant anamnesis examinations and those that are not based on the qualities of clinical evidence, and also increase the stimulus for further studies in the area. This sequence of JAMA articles, currently in 2019, continues and throughout its existence, various information obtained from anamneses and clinical examinations have been analyzed and discussed [10- 21]. Other works on this subject have been published, however, there are still not many studies done in this area [22-26].

There is no divergence between complementary exams, clinical examination, and anamnesis, all of them are important tools to be used by doctors. However, it is important to have a priority in the examination request, which can only be felt the, by performing a good history and physical examination, with the understanding and analysis of data and information collected based on clinical medicine.

In this context, factors such as insecurity, decreased consultation time, conflicts of interest, defensive medical posture, the appreciation of laboratory tests to the detriment of anamnesis have contributed to the increased demand for complementary exams to aid diagnosis [27]. However, medical diagnostics should be based on up-to-date protocols and local epidemiology [28], so those excess screening requirements can be avoided and financial resources can be spent more efficiently and effectively. Thus, medical expenditure management should not only focus on reducing costs, but should be the basis for better

ISSN No:-2456-2165

distribution and use of available resources, so that greater organizational effectiveness can be achieved and this reflect on improving the quality of health care for the population [27].

## IV. CONCLUSION

Looking for new ways to cut spending, reduce hospitalizations, suppress health problems and increase the efficiency of health care resources needs to be the goal of hospital and health center administrators. Appreciation of strategies that work together focused on the needs of the patient and not just the disease is needed. Physical examination and anamnesis should never be considered inferior to complementary exams. Failure can be guaranteed to health systems and professionals who choose to replace the medical clinic with technology in computerized systems to reach the diagnoses.

The importance of internal medicine and the way decisions are made seem to have been undervalued and discussed both in medical education, and academia. Therefore, doctors need to know the importance of this valuation, as it is essential to avoid errors that can cause legal proceedings against themselves and to enable the provision of better and more effective service to the population.

#### REFERENCES

- [1]. Hampton JR, Harrison MJG, Mitchell JRA, Prichard JS, Seymor C. Relative contributions of historytaking, physical examination, and laboratory investigation to diagnosis and management of medical outpatients. BMJ. 1975;2:486-9. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC16734 56/pdf/brmedj01449-0038.pdf
- [2]. Sandler G. The importance of the history in the medical clinic and the cost of unnecessary tests. Am Heart J. 1980;100:928-31.
- [3]. Peterson M, Holbrook JH, De Von Hales, Smith NL, Staker LV. Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. West J Med. 1992;156:163-5. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC10031 90/pdf/westjmed00090-0053.pdf
- [4]. Roshan R, Rao AP. A study of relative contributions of the history, physical examination and investigations in making medical diagnosis. JAPI. 2000;48:771-5.
- [5]. Bensenor IM. O papel da anamnese, do exame clinico e dos exames complementares no diagnóstico clínico [tese]. São Paulo: Faculdade de Medicina, Universidade de São Paulo; 2003.
- [6]. Giordano LA, Giordano MV, Giordano EB, Silva RO. Exames pré-operatórios nas cirurgias ginecológicas eletivas. Femina. 2009 Nov;37(11):619-5.
- [7]. Rojas-Rivera W. Evaluación de los exámenes preoperatorios. Acta Méd Costarric. 2006 Oct; 48(4): 208-11.

- [8]. Sharma GK, Sharma SB, Shaheen WH. Preoperative Testing. Contributor Information and Disclosures 2009.
- [9]. Simel DL, Rennie D. The clinical examination an agenda to make it more rational. JAMA. 1997;277:572-574-8. doi:10.1001/jama.1997.03540310070037.
- [10]. Deyo RA, RainvilleJ, Kent DL. The rational clinical examination. What can the history and physical examination tell us about low back pain? JAMA. 1992;208:760-6. doi:10.1001/jama.1992.03490060092030.
- [11]. Grover AS, Barkun NA, Sackett DL. The rational clinical examination. Does this patient have
- splenomegaly? JAMA. 1993;270:2218-45. doi:10.1001/jama.1993.03510180088040. [12]. Naylor CD. The rational clinical examination.Physical
- examination of the liver. JAMA. 1994;271:1859-65. doi:10.1001/jama.1994.03510470063036.
- [13]. Cook D, Simel, DL. The rational clinical examination. Does this patient have abnormal venous pressure? JAMA. 1996;28:630-4. doi:10.1001/jama.1996.03530320054034.
- [14]. Whited JD, Grichnik JM. The rational clinical examination. Does this patient have a mole or a melanoma? JAMA. 1998;279:696-701. doi:10.1001/jama.279.9.696.
- [15]. Akbar AP, Hemmelgarn BR, Guyatt GH, Simel DL. Is this patient having a myocardial infarction? JAMA. 1998;280:1526-63. doi:10.1001/jama.280.14.1256.
- [16]. Lederle FA, Simel DL. The rational clinical examination. Does this patient have aortic aneurysm? JAMA. 1999;281:77-82. doi:10.1001/jama.281.1.77.
- [17]. Ford AC, Talley NJ, Veldhuyzen van Zanten SJO, Vakil NB, Simel DL, Moayyedi P. Will the History and Physical Examination Help Establish That Irritable Bowel Syndrome Is Causing This Patient's Lower Gastrointestinal Tract Symptoms? JAMA. 2008;300(15):1793–1805. doi:10.1001/jama.300.15.1793
- [18]. Srygley FD, Gerardo CJ, Tran T, Fisher DA. Does This Patient Have a Severe Upper Gastrointestinal Bleed? JAMA. 2012;307(10):1072–1079. doi:10.1001/jama.2012.253
- [19]. Wood E, Kerr T, Rowell G, et al. Does This Adult Patient Have Early HIV Infection? The Rational Clinical Examination Systematic Review. JAMA. 2014;312(3):278–285. doi:10.1001/jama.2014.5954
- [20]. Easter JS, Haukoos JS, Meehan WP, Novack V, Edlow JA. Will Neuroimaging Reveal a Severe Intracranial Injury in This Adult With Minor Head Trauma? The Rational Clinical Examination Systematic Review. JAMA. 2015;314(24):2672–2681. doi:10.1001/jama.2015.16316
- [21]. Albassam OT, Redelmeier RJ, Shadowitz S, Husain AM, Simel D, Etchells EE. Did This Patient Have Cardiac Syncope? The Rational Clinical Examination Systematic Review. JAMA. 2019;321(24):2448–2457. doi:10.1001/jama.2019.8001

ISSN No:-2456-2165

- [22]. Smith BW, Green GA. Acute knee injuries: Part I. History and physical examination. Am Fam Physician. 1995;51(3):615-21. Available from: http://goo.gl/FZMyD2
- [23]. Cuomo F. The value of the history and physical for shoulder pain [editorial]. West J Med. 1995;163:389-90. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC13031 47/pdf/westjmed00361-0073.pdf
- [24]. Davis-Joseph B, Tiefer L, Melman A. Accuracy of the initial history and physical examination to stablish the etiology of erectile dysfunction. Urology. 1995;45:498-502. http://dx.doi.org/10.1016/S0090-4295(99)80022-3
- [25]. Cleland JGF, Habib F. Assessment and diagnosis of heart failure. J Intern Med. 1996;239:317-25. doi: 10.1046/j.1365-2796.1996.462801000.x
- [26]. Drager LF, Abe J, Martins MA, Lotufo PA, Benseñor IM. Impact of clinical experience on quantification of clinical signs at physical examination. J Intern Med. 2003;253:1-7. doi: 10.1046/j.1365-2796.2003.01183.x
- [27]. Aguiar FJB, Ferreira-Júnior M, Sales MM, Cruz-Neto LM, Fonseca LAM, Sumita NM, et al. Proteína C reativa: aplicações clínicas e propostas para utilização racional. Rev Assoc Med Bras [Internet]. 2013 [citado 2013 out 27];59(1):85-92.
- [28]. Moura A, Viriato A. Gestão hospitalar: da organização ao serviço de apoio diagnóstico e terapêutico. Barueri: Manole; 2008. p.105.