



Non-universality of Diseases Signs and Symptoms; a DE Factor

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Received: 27-October-2022, Manuscript No. IJMRHS-22-76266; **Editor assigned:** 31-October-2022, Pre QC No. IJMRHS-22-76266 (PQ); **Reviewed:** 14-November-2022, QC No. IJMRHS-22-76266; **Revised:** 23-February-2023, Manuscript No. IJMRHS-22-76266 (R); **Published:** 03-March-2023

ABSTRACT

A disease is an abnormal condition in which the normal function of the body or part is interrupted resulting in a discomfort such as: Pain, distress or death. Diseases can either be infectious caused by pathogenic microorganism or non-infections due to genetic factors, environment and degeneration of organs. There are peculiar signs and symptoms for infectious and non-infectious diseases. Often times one or more of these signs and symptoms may be lacking in a patient while in some cases, there could be another sign or symptoms not common in other similar cases. The appearance of a sign and symptoms like vomiting in malaria which is also a symptom for another disease like hepatitis suggest some symptoms are not only for one disease. This slight variation in signs and symptoms among patients of the same illnesses could be traced to certain factors such as immunity, genetic, pathogens virulence and environment. Therefore a "DE factor principle" is opined to describe the incomplete universality of disease signs and symptoms and states. The signs and symptoms for a particular disease could be different in some respects among patients with same illness with reasons trace to a factor. It also suggests DE factor to be written at the end of listing signs and symptoms during consultations to indicate some signs and symptoms presented could also suggest other sicknesses.

Keywords: Diseases, DE factor, Symptoms, Infectious, non-Infectious, Factor

INTRODUCTION

A disease is a pathologic condition in which the normal function of the body or its part in an organism is interrupted resulting in pain, distress, dysfunction or even death [1]. Diseases can either be infectious or non-infectious. Infectious diseases are diseases caused by harmful agents also called pathogens (infectious agents) such as viruses, bacteria, fungi or parasites [2]. Diseases are associated with specific and peculiar signs and symptoms which may include: Fever, nausea, vomiting, cough, diarrhea, swellings, pains and many more depending on the type and etiologic agent [3]. Non-infectious diseases are not caused by pathogens (microorganisms) but by genetic factors, anatomical differences and the environment. The signs of a disease are the objective evidence such as: Cough, rash, swellings, among many that can be seen physically on examination by a doctor, another person or individual experiencing the sicknesses [4]. On the other hand, the symptoms of a disease are the physiological or mental experience such as headache, nausea, fatigue, pain that suggest a disease state in an individual [5]. It is important to note that some infectious diseases show similar signs and symptoms in some respects despite involvement of different etiologic agents which could be identified through laboratory tests. Symptoms cannot be seen on physical examination or laboratory tests but can only be felt by the patients. Some infectious diseases like flu can spread from one person to another while others like food poisoning cannot [6]. Non-infectious diseases are not caused by

pathogens (microorganisms) but by genetic factors, anatomical differences and the environment. Therefore, this paper is aimed at drawing the attention of concerned individuals, medical professionals and scientists to the fact that some disease signs and symptoms manifest in varying degrees and numbers from one patient to another with reasons trace to a factor either in the patient or the cause; some signs and symptoms manifests in more than one illness: What a DE factor.

DESCRIPTION

Reviewed cases

Different patients with similar illness tend to show similar signs and symptoms in some respect but not uniform altogether. A review of certain illnesses is below.

Malaria

There are many reports on malarial signs and symptoms. These include: Headache, chills, muscles aches, nausea, vomiting, diarrhea, anaemia and jaundice [7]. Similarly, chills, fever, general feeling of discomfort, nausea, vomiting, diarrhea, headache, abdominal pain, muscles or joint pain, fatigue, rapid breathing, rapid heart rate and cough has been reported in a related report [8]. Furthermore, chills with body shaking, fever and sweating, headache and muscles aches, fatigue, chest pain, breathing problems, cough, diarrhea, nausea, vomiting, anaemia and jaundice. In a related report, high temperature, sweats, chills, headache, confusion, tiredness, abdominal pain, diarrhea, loss of appetite, jaundice, muscles pain, sore throat and difficulty in breathing. Therefore, some signs and symptoms are similar in all cases, other signs and symptoms are not common to all cases. Not all positive cases vomit; have fever, sore throat, breathing problems, etc. Malarial total signs and symptoms manifest may differ in a way from one person to the other suggesting a non-universality of total signs and symptoms. This could be attributed to an unknown factor playing a role in the patient. In other word, while malarial patients may have malarial signs and symptoms, there could be variation in some respect from one person to another. The question is do all malarial positive patients vomit, have headache, body shaking, nausea, abdominal pains, sweat, muscles pains, sore throat diarrhea, etc. The factor responsible for slight variations (either absence or presence of some signs and symptoms in an individual different from other persons) is the point of concern. It is worthy of note that not only malaria causes vomiting, nausea, headache, abdominal pain, jaundice, etc. This uncertainty can be attributed to an unknown factor.

Typhoid fever

There are also several reports on the signs and symptoms of typhoid fever. Notable among many include: constipation, diarrhea, headache, high fever, stomach pain. In another report, weakness, cough, loss of appetite, constipation or diarrhea, stomach pain and headache. Similarly, headache, poor appetite, generalized aches and pains, lethargy, high temperature, diarrhea, chest congestion and abdominal pain. Different patients may exhibits signs and symptoms similar in some respects but not in total uniformity in some occasions. This could be attributed to unknown factors within the host or pathogen.

COVID-19

Reported signs and symptoms of COVID-19 include: Fever, chills, cough and shortness of breath, muscles or body aches, headache, fatigue, nausea, vomiting, nasal congestion, sore throat. In another report, tiredness, memory problems, shortness of breath, difficulty sleeping, general pain and discomfort, anxiety and depression, difficulty thinking or concentrating, Post Traumatic Stress Disorder (PTSD) were the symptoms. Furthermore, fever, cough, shortness of breath, sore throat, headache, fatigue, runny nose, muscles or joints pains, nausea, vomiting, diarrhea, loss of appetite, altered sense of taste, temporary loss of smell. Some patients may exhibit but a few of these signs and symptoms while others many. This suggests a factor either within the host or pathogen responsible for the number of signs and symptoms exhibited by the patient. The point to note, not all COVID-19 patients exhibit all the symptoms in the different reports. There could be one or more symptoms lacking in the presence of common ones. This also suggests a factor either in the host or pathogen (presence or absence of a virulence factor in the pathogen). In some cases, not all patients show signs and symptoms of the diseases in all respects, some may be the same but

few may be lacking or present in the midst of the general signs and symptoms. Furthermore, some signs and symptoms like vomiting, loss of appetite, fever and many more are suggestive of other illnesses such as malaria, hepatitis, etc.

Type-2 diabetes mellitus

Symptoms reported for type 2 diabetes mellitus include: Thirst, frequent urination, hunger, blurred vision, weight loss, slow healing sores, numbness in the feet or fingers, areas of darkened skin in the armpit or neck. In a related report, blurred vision, fatigue, intense hunger and thirst, slow healing wounds, frequent night urination, tingling in the hands or feet, weight loss. Long term type 2 diabetes mellitus complications may include retinopathy (Eyes damage), kidney disease (Nephropathy), neuropathy (Nerves damage), heart disease, damage to blood vessels and brain. Similarly, there may be diabetic ketoacidosis, Hyperosmolar Hyperglycemic Nonketotic State/Syndrome (HHNS) (Hallucinations, vision loss, confusion, extreme thirst, fever, warm skin without sweat), high blood pressure (Stroke), nerve damage, gastroparesis (Retention of gastrointestinal waste), kidney damage, foot ulcer, memory problems and tooth decay. Do all type 2 diabetics develop Ketoacidosis, foot ulcer, kidney damage, stroke and others within the same period of the disease? Some patients likely develop complications faster than others; even the complications vary from one patient to another. This suggests there is a factor, in addition to the quality of glucose control in the patient, responsible for symptoms or type of long term complication developed by the patient. This argument is applicable to other infectious and non-communicable diseases not mentioned in this paper. The point is this, hosts response varies in some respects among patients with same illnesses.

Opinion

Signs and symptoms displayed in different patients with similar disease seems to differ in one respect or the other despite the presence of generally known symptoms for the diseases. This variation could be attributed to the:

- Immunity of the patients.
- Genetic predisposition.
- Virulence of a pathogen.
- Environment.
- Treatments and use of preventive measures.

It is worthy to note the following:

- Some of these factors are internal and are not seen by the Doctor at the time of consultation while others are known through questioning.
- Some signs and symptoms for an illness may also be signs and symptoms for another diseases e.g. vomiting and jaundice in the case of malaria, hepatitis B patients may also vomit and have jaundice, etc.
- Patients of a particular disease may not show completely similar symptoms in terms of number and type, there could be one variation in addition to common symptoms for the disease. This could suggest an unknown factor as the cause.

Therefore, the signs and symptoms of a disease may not be completely similar in all cases despite visible general signs and symptoms, there could be one factor or more which determine the severity or differences in signs and symptoms from one patient to another. Furthermore, since some symptoms known for a particular illness are also symptoms for another, I am of the opinion the term: “DE factor” be used at the end of listing symptoms for a disease at the time of consultation example headache, high body temperature, vomiting, yellow eyes, DE factor. This suggests the list of these signs and symptoms is either not exhausted or some are also indicators of another different ailment which can be identified through laboratory test or other means of diagnosis. Also, scientifically, a “DE factor principle” for incomplete universality of disease signs and symptoms to state”. The signs and symptoms for a particular disease could be different among patients of same illness in some respects with reasons trace to a factor.

CONCLUSION

Some patients with similar illness shows different degrees (severity) of signs and symptoms with reasons trace to a “factor”. Sometimes the signs and symptoms that are known for an ailment are also revealed in patients with

different sicknesses. This opinion report is suggesting a “DE factor” to be written at the end of listing signs and symptoms during medical consultation, signifying the sickness under investigation is not yet confirmed and some of the signs and symptoms revealed by the patient could suggest more than one sickness until investigation is done. Also, to propose a scientific recognition for the fact that some signs and symptoms known for an ailment may also be enlisted in another sickness leading to a “DE factor principle”. This principle to be called: Waje DE factor principle “which is to state”. The severity in terms of signs and symptoms for a particular disease could be different in some respects among patients with similar illness with reasons trace to a “factor” and some signs and symptoms known for a particular ailments could also show in patients with a different sickness.

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