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AN INNOVATION DEVELOPMENT OF DISEASE IDENTIFICATION USING MEDICAL DEEP LEARNING MODEL

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ABSTRACT

Diagnosis is an area of utmost importance in medical treatment. A person can be cured only when the doctor properly diagnoses the disease and gives the appropriate treatment. However, wrong diagnosis, wrong treatment even when the disease is correctly diagnosed, and wrong treatment can cause side effects and delay the cure. Sometimes it can be life-threatening. It is important for us to know how allopathic doctors, who are now called modern doctors, diagnose disease. They first note down the patient's complaints in order. In this paper, an innovation development of disease identification was proposed using medical deep learning model. The complete and correct information they can provide helps in proper diagnosis. Only after that the doctors examine the patient's body. Testing is not just about checking pulse and blood pressure. All body parts will be examined like abdomen, nervous system-brain function, muscle, skeletal system. Urinary tract and sexual organs will also be examined by the appropriate doctor. Thus, after doing a full body examination, they find out what the patient is suffering from.

Keywords: diagnosis, medical, treatment, doctor, patient, complaint, disease, identification, deep learning

1. INTRODUCTION

Blood, urine, tissue tests and X-rays and scans are done to confirm the disease. After that, based on the test results, the doctor knows the nature of the disease and decides what kind of treatment should be given to it [1]. That is why patients should not hide anything from their doctors like their diet, exercise, alcohol, drugs, smoking, habits, other diseases and treatments. Role of laboratories in misdiagnosis As much as laboratories help diagnose disease, the role of

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laboratories in misdiagnosis is as great [2-3]. If a tumor occurs, it may be a normal tumor or a cancerous tumor. The woman's tissue test report, which was sent outside for examination, showed cancer, so the doctors immediately started chemotherapy treatment for it [4]. This is because cancer treatment should not be delayed. Tissue tests revealed that one was cancerous and the other was not [5]. On the face of it many people may think that one thing is right and the other wrong. Chances are, both are correct. However, cancer cells may have been detected in the first donated tissue [6]. Second, a given tissue may be devoid of cancer cells.Because when a small amount of suspicious tissue is removed, the surrounding tissue is also removed. This leaves room for error [7]. But repeated tests confirmed that this woman's tumor was not caused by cancer. Therefore, it has been proven that the laboratory that did the test in the first place had mistakenly reported cancer. Here the woman has suffered a lot due to the side effects of the chemotherapy treatment given due to a wrong diagnosis which resulted in hair loss and sores in many parts of her body [8].

Now the patients talk about the disease as if it was the disease that happened to them like the doctor. In this modern world, many people, if something bothers them, immediately go to the Internet and investigate what is the cause of that disturbance and do various tests themselves without a doctor's prescription [9]. They try to diagnose the disease themselves. Then the report is sent to the known doctor on the cell phone asking what the disease is and asking him to send the medicine for it [10]. I get a lot of these cell phone tips on a daily basis. This attitude of people can lead to wrong diagnosis and treatment. This should be avoided. If it is difficult to diagnose the disease, you can get a second opinion from another doctor [11]. Then there is no chance of misdiagnosis and misdiagnosis.Laboratories should be very careful. One patient's test report should not be given to another [12]. It should assist the doctors in their treatment by examining more accurately and giving correct results. Modern technology should be upgraded.Doctors, nurses, medical staff, assistants, and those who transport patients to the operating theater must be very careful and alert to avoid mishandling and accidents [13].Laboratory tests lead to various false diagnoses. If the patient or the doctor tries to diagnose the disease by relying on tests alone, it will be wrong. Impersonal treatment is rare. When two people with the same name or the same pronunciation or the same appearance or the same age are admitted for surgery at the same place and in the same ward, such impersonal treatment is done due to lack of attention. Many people think that diagnosing disease is a very easy job for doctors. But that is wrong. Most diseases are diagnosed by doctors [14]. However, they are struggling to find some diseases. For example, you may have seen and experienced that if you have a fever; doctors will examine the patients and do some simple tests to find out whether it is malaria, dengue, and typhoid or rat fever.

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2. Literature Review

Generally, doctors say that women have the hormone estrogen and men have the hormone testosterone. As long as a woman is menstruating, her body has high levels of the hormone estrogen. In such a situation this hormone protects the woman until her period, but after menopause, the risk of heart attack increases [1]. Men are more likely to have a heart attack than women at age 45. The ratio is 10:1. That means one woman has a heart attack compared to ten men. As a woman's estrogen levels drop and menopause begins, the risk of heart attack increases. At the same time, at age 60, the number of heart attacks becomes equal for men and women [2]. After age 65, more heart attacks occur among women than men. In such a situation, doctors advise both women and men to focus on their diet and exercise. Changes in women's lifestyles push them towards such diseases [3]. The risk of such diseases has started to increase due to smoking, drinking alcohol and food made. On the other hand women who stay at home do not pay much attention to exercise. Doctors say that if you suddenly start going to the gym and do unfamiliar exercises, you may face problems [4]. Doctors advise to increase its dosage gradually while exercising. If you are preparing to take part in any competition then get medicalcheckup before. If you sweat profusely, drink plenty of water and take care not to deplete your body of salt. Alcohol, tobacco and drug consumption can affect health. It can also increase the risk [5].

Don't drink energy or muscle building drinks. Because they contain drugs that can make you feel agitated. They also contain artificial ingredients that are harmful to you. Both doctors advise that you need to pay attention to your health not only after retirement, but also in your youth. Controlled diet and exercise is the key to good health [10]. Colon cancer is not a hereditary disease. However, if any of your relatives have been diagnosed with this disease before the age of 50, you should inform the doctors [11].

3. Proposed Model

It is a common disease of the circulatory system. It affects too many people. It affects 34% of the total population. This disease is a disease that can be caused by excessive fat deposits around the heart blood vessels, reducing the blood flow to the heart muscles. Modifiable factors: smoking, high blood pressure, high blood cholesterol. High blood sugar, obesity, infection, non-modifiable factors: If anyone in the family has the disease, men are more likely to develop it after the age of 45 and women after the age of 55. Women are more prone to this disease.A medical history should be collected from the patient. Physical examination. Lovely picture. Echo (Echo) E.C.G. Cardiac catheterization, nuclear imaging study (Nuclear imaging study) and blood test can diagnose this disease. Fixing the head and body in a slightly elevated position Fowler's Position The following drugs are used to cure this disease. Morphine (Morphine) is used as a pain reliever and diuretics) to correct swelling. Digitalis and nitroglycerin are used. If the patient's condition is

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very severe, mechanical ventilation should be given. Body weight should be monitored regularly. Oxygen should be administered to the patient. It is recommended to avoid high fat foods like meat, butter, ghee, pulses, etc.Advise the patient to avoid sedentary work. Avoid smoking, drinking alcohol and use of betel leaves. Avoid strenuous work should be advised. But, you can do small exercises (walk training). If something bothers the body, it should be encouraged to consult a doctor. The nurse should continuously monitor body temperature, pulse, blood pressure, and respirations.Urine output should be noted regularly. The patient should be taught to rest in Fowler's position. The family should provide psychological comfort and good ventilation to the patient. Gastric ulcer: This disease is caused due to increased amount of hydrochloric acid and pepsin and erosion of the intestinal wall. Gastric ulcer is often caused by the bacteria Helicobacter pylori. If someone in the patient's family has the disease, he or she is more likely to develop it. People with '0' blood group. Alcohol consumption, smoking, mental exertion are the main causes. These pains are dull and irritating in the upper abdominal region. There will be pain in the back. This pain is cured by taking food. Other symptoms may include chest irritation, vomiting, constipation, diarrhea, bloody stools, and tarry stools. Pain occurs when the upper abdomen is touched. Abdominal salience can be diagnosed through physical examination. Endoscopy plays an important role in diagnosing it. Helicobacter pylori bacteria can be detected by stool examination and biopsy. This disease can be cured by changing the eating habits. A method to prevent mental exertion should be to suggest a change in eating habits.

Obesity is caused by the accumulation of excess fat in the body's adipose tissue. This disease is caused by overstimulation of the body's intake center and increased levels of glucocorticoids. Hereditary factors and environmental factors are the main cause. A feeling of needing to eat more food is also a reason. The consequences of this disease are more than expected. These include high blood pressure, high blood cholesterol, type 2 diabetes, joint pain, gout, insulin resistance despite high insulin levels, respiratory system disorders, circulatory system diseases, gall bladder diseases, fatty deposits in the liver, stroke and some types of cancer.Disease can be diagnosed through history and clinical examination.Obesity can be detected through BMI calculation.Patients should be encouraged to engage in daily activities and lose weight.Adjust dietary habits.

4. Results and discussion

The proposed medical deep learning model (MDLM) was compared with the existing Deep learning in medical imaging (DLMI), Dermatological disease detection (DDD), deep learning based multi-class classification method (MCCM) and deep learning model for malaria disease detection (MDD)

Hormone management:A test based on the hormone HCG. This hormone increases after pregnancy. Therefore, one can confirm that one is pregnant with this test within 6 to 12 days of

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conception. If something goes wrong while doing this test, they will report that you are not pregnant. If on this basis the doctor says that the woman is not pregnant, that took turns out to be a misdiagnosis.There is another side to this. This was shown in table 1.

Table 1: Comparison of Hormone management

No.of Inputs	DLMI	DDD	MCCM	MDD	MDLM
100	49.20	66.93	79.39	46.92	88.19
200	47.90	65.93	78.69	45.84	88.03
300	46.60	64.93	77.99	44.76	87.87
400	45.30	63.93	77.29	43.68	87.71
500	44.00	62.93	76.59	42.60	87.55
600	42.70	61.93	75.89	41.52	87.39
700	41.40	60.93	75.19	40.44	87.23

In other words, we say that there is pregnancy based on the presence of HCG-hormone in the urine test. But even if a woman is not pregnant, this hormone can also be excreted in the urine by some types of cancer. So if the doctor says that the woman is pregnant then it is also a false diagnosiswill be detected.

Diagnose management: However, some chronic fevers can be difficult to diagnose. If you don't know what the fever is after more than 3 weeks or more than 3 days after being in the hospital, that fever is called the fever of unknown cause.Such a prolonged fever may be caused by tuberculosis or may be caused by AIDS or connective tissue diseases. This was shown in table 2.

Table 2: Comparison of Hormone management

No.of Inputs	DLMI	DDD	MCCM	MDD	MDLM
100	52.90	68.87	77.94	44.47	88.51
200	52.06	67.57	77.16	43.12	87.92
300	51.23	66.26	76.37	41.77	87.34
400	50.39	64.96	75.59	40.42	86.75
500	49.56	63.65	74.80	39.07	86.17
600	48.72	62.35	74.02	37.72	85.58
700	47.89	61.04	73.23	36.37	85.00

Then the tests should be done. 200 types of diseases can cause such fever. 20 percent of the diseases may not be detected until the end. Dust can be controlled by wearing a mask. Increase ventilation in the workplace. Equipment should be used to reduce dust.

Humidification management: It can reduce the density of dust in the air. Rheumatic heart disease is an inflammatory disease. It affects all three chambers of the heart. It is often caused by a bacterial infection. Streptococcus bacteria are the first. Rheumatic fever is also caused by a respiratory tract infection. If someone in the family has been affected by this disease before, the chances of developing this disease are high. This was shown in table 3.

Table 3: Comparison of Hormone management

No.of Inputs	DLMI	DDD	MCCM	MDD	MDLM
100	56.07	74.16	81.02	50.04	91.00
200	55.74	72.66	80.43	48.17	89.96
300	54.40	71.55	79.45	47.34	89.83
400	53.73	70.18	78.73	45.82	89.09
500	52.90	68.88	77.95	44.47	88.51
600	52.06	67.57	77.16	43.12	87.92
700	51.22	66.27	76.38	41.77	87.33

The symptoms and signs of this disease are called Jones criteria. Key symptoms are the carditisi.e. cardiac arrhythmia, joint pain, chorea, tumor in adipose tissue. Other symptoms are Fever (103°F) Joint pain.

Clinical examination management: The disease can be diagnosed by history and clinical examination. Anti-strepholysin-o (Anti-strepholysin-o) test can confirm this disease.This disease can be detected by Throat culture, C-reactive protein (C-reactive protein) test on white blood cells, Chest X-ray (Echo cardiogram). This was shown in table 4.

Table 4: Comparison of Hormone management

No.of Inputs	DLMI	DDD	MCCM	MDD	MDLM
100	50.20	68.23	75.29	43.31	87.95
200	49.32	67.26	74.16	42.18	87.54
300	48.33	66.28	73.17	41.12	87.14
400	47.34	65.31	72.17	40.05	86.74
500	46.41	64.34	71.11	38.96	86.34
600	45.45	63.36	70.08	37.87	85.93
700	44.49	62.39	69.04	36.79	85.53

In this disease, the patient should be given adequate rest. Benz penicillin (1200000 units IV, IM) (M procaine penicillin (6,00,000 Units, UM Qd) should be given for 10 days. Aspirin is used to relieve pain. Corticosteroids are also used. The nurse should support the patient.

Disease management: General rest, low-fat diet should be given to the patient. Adequate skin protection should be provided to reduce infection. A pillow with a cotton ball can be used to reduce joint pain. The patient should be monitored for regular check-ups. This was shown in table 5.

Table 5: Comparison of Hormone management

No.of Inputs	DLMI	DDD	MCCM	MDD	MDLM
100	53.26	71.17	78.24	46.43	88.87
200	52.21	70.16	77.10	45.51	89.30
300	51.50	69.23	75.99	44.18	88.06
400	50.56	68.25	74.86	43.12	87.93
500	49.68	67.28	73.74	42.00	87.53
600	48.80	66.31	72.61	40.87	87.12
700	47.92	65.34	71.49	39.75	86.72

The nurse should monitor body temperature, pulse and respirations. Timely, correct The medicine should be prescribed.The symptoms, signs and effects of the disease should be correctly diagnosed and referred to the doctor for examination. That is why it is advised that whenever any laboratory test results are given, consult your doctor and confirm the disease.

5. CONCLUSION

Certain genetic conditions, such as Lynch syndrome, make people more likely to develop colon cancer. But if doctors are aware of this, this can also be prevented. Scientists say that more than half of bowel cancers can be prevented by adopting a healthy lifestyle. Exercise more; eat a high-fiber and low-fat diet, and drink six to eight glasses of water a day. Any worrisome symptoms should be seen immediately by a doctor and get tested for cancer. Colon cancer can be diagnosed with a colonoscopy procedure, which examines the entire colon with a camera on a long tube, or a sigmoidoscopy procedure, which examines a portion of the colon. More than 90 percent of people diagnosed with early-stage colon cancer survive for five years or more. Only 44 percent of those diagnosed late survive for five years or more. Colon cancer is completely curable if detected at an early stage. Individualized treatment methods are now on the rise. This approach needs further improvement. But it ensures that cancer patients survive for extra years.

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