

EFFECT OF DAILY CIGARETTE SMOKING ON THE CIRCULATORY SYSTEM

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Abstract

The deposits that tobacco leaves on the walls of the blood vessels constitute an obstacle to the excessive red blood cells produced by the smoker's body, which compensate for the lack of oxygen, which leads to the accumulation of red blood cells and a reduction of blood flow through the vessels. This in turn leads to venous clots in different parts of the body.

Keywords: Cigarette, Clots, Smoking, Stick blood.

1. INTRODUCTION

The number of people around the world who smoke has exceeded one billion, and they ignore the danger of smoking that threatens their lives, as well as the chronic diseases that accompany it.

The danger of smoking is that it changes the physiology of the blood vessels and the accumulation of plaque in them, which causes poor perfusion, which in turn forms clots.

In this case, we review the effect of long-term smoking on the circulatory system

Which causes eye and heart venous thrombosis Based on the data and vital indicators and the importance of therapeutic intervention and aspirin for smoking addicts to reduce the risk of clot formation and speed up the flow of blood through the walls of blood vessels.

We aim to evaluate the role of aspirin for excessive smoking, especially at ages over 30 years

2. DESIGN / METHODOLOGY / APPROACH

The proposed approach is used to study the effect of tobacco on blood flow through the blood vessels of a 50-year-old patient.

Findings

Studying the relationship between the number of blood cells and red blood cells in tobacco addicts is considered one of the main reasons for the formation of blood clots, and not only in the heart and lungs, but its effect may extend to those capillaries that feed the retina.

And the extent of the effect of daily cigarette smoking on blood flow by studying the results of laboratory tests for the condition

We have an important proposal to include Therapeutic Donation and, Low doses of aspirin in the daily regimen of smokers, especially those over the age of fifty, to avoid venous thrombosis.

3. CASE ANALYSIS

A 50-year-old man presented to the ER complaining of chest pain radiating to left arm, back and Slurred speech.

Past Medical History

He is not a prown hypertension not diabetic, Central retinal vein occlusion was diagnosed (CRVO)in Jul 2017, But he's a heavy smoker using up to 5 cigarettes a day. He was on aspirin but he stopped it 2 months ago.

Post-Operative history:

injection OD Avastin, there was an improvement in the central macular edema, but the effect of the thrombus persisted in the central vein of the right retina

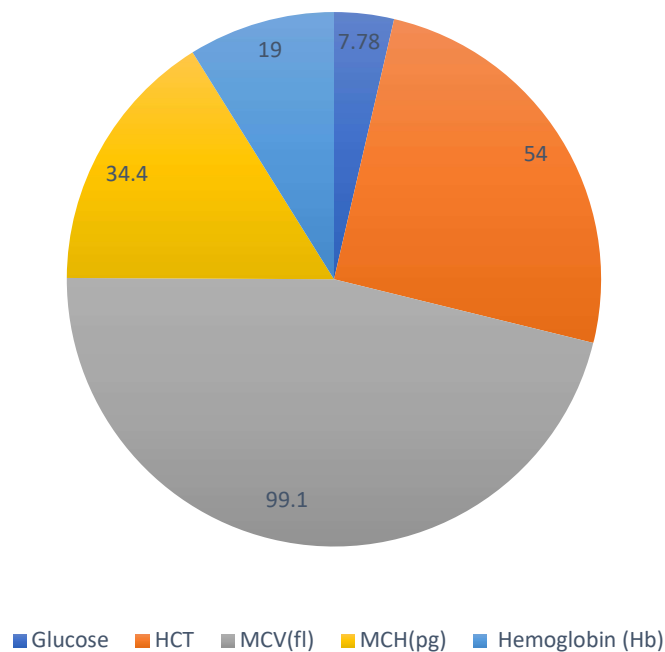
Vitals

B.P: 105/67, MMHG SAT -90% in RA HR-107/MIN RR-21/MIN

4. RESULTS

Chart (1) Shows the results of the patient's blood count in September 5, 2019.

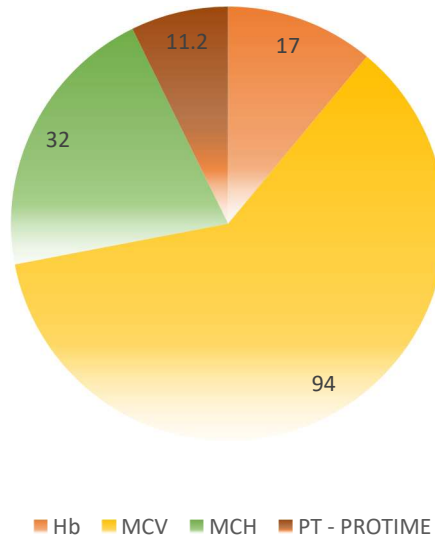
Chart (1)



We see an increase in (HB=19), (MCV=99.1) and (MCH=34.4).

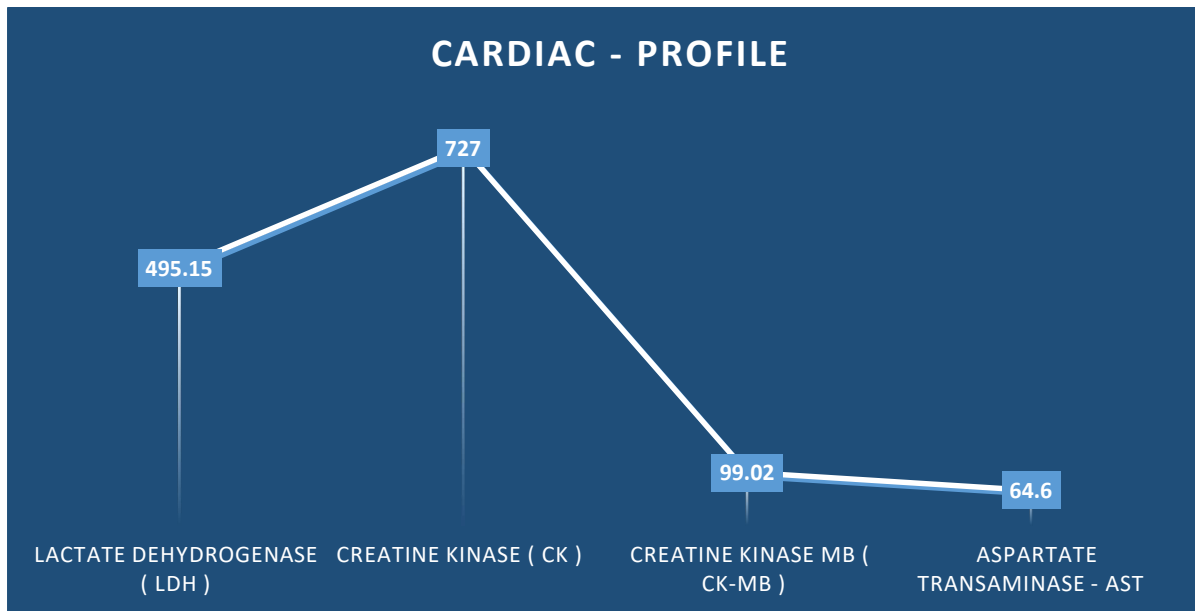
After 6 months of the patient's commitment to treatment and blood donation, we see a decrease in the percentages of (Hb=17), (MCV=94) and (MCH=32). (Chart2).

CHART 2



On March 29, 2020, the patient entered the ER and blood tests were performed for him, and the results showed an increase in the percentage of Lactate Dehydrogenase (LDH)=595.15 & creatine phosphokinase (CK)= 727 (Chart 3).

It is Tow types of the hundreds of enzymes that we can find in the blood. Its levels are very well established and any irregularity can cause problems, whether it is upward or downward The analysis of these blood elements can help detect conditions that generate tissue damage or injury (liver or blood diseases) and monitor their progression. In fact, it can also be used to establish the stage of certain types of cancer, determine its prognosis or response to treatment and other functions.



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High LDH & CK may have another cause: ischemia, a decrease, or in some cases stopping, of blood circulation through the arteries in a specific area of the body. This fact prevents the oxygen carried by the blood from reaching the organs or tissues that need it, causing cellular suffering.

On the same day, a chest x-ray and an electrocardiogram (ECG) were performed FOR the patient, the results of which were as follows:

CVS: S1, S2 chest: clear

ECG:SR Troponin I: 0.4→ 0.84 Trop T:280 CK:759 CKMB:67

❖ **Impression:**

Acute NSTEMI For CAG

LAD: 40% stenosis and subtotal occlusion in mid part

LCX: Mild Plaque burden RCA: 40% stenosis.

Recommendations end:

PCI of LAD: Percutaneous Coronary Intervention (PCI, formerly known as angioplasty with stent) is a non-surgical procedure that uses a catheter (a thin flexible tube) to place a small structure called a stent to open up blood vessels in the heart that have been narrowed by plaque buildup, a condition known as atherosclerosis.

5. CONCLUSION

Excessive cigarette smoking in this patient led to severe venous thrombosis

Laboratory tests revealed in improvement in his condition following red blood cells post therapeutic Donation

This helps improving of blood flow and prevents red cell accumulation

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