Research Article

Variations in Spirometric Parameters in Smokers

Mouloud Bentrad*

***Corresponding Author: Dr. Mouloud Bentrad,** pneumologue university of Algeria, Algeria.

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Reminder

The COPD post smoking it's an affection which is characterized by:

An inflammation

- Chronic
- Destructively
- Irreversible
- Insidious

Tobacco smoke is only a factor, not a cause. It begins at the distal airways and progressing slowly towards the large branches it's a serious affection that leads to death.

According to the latest estimates published by OMS:

- In 2016 the prevalence was 251million cases of de COPD.
- More than 3 million people died from COPD in 2015.
- Over 90 % of COPD occurs in low and middle-income countries.
- An upsurge shortly is very likely due to the linear prevalence of smoking word wide.
- Prevent this serious affection based on early diagnosis and smoking cessation.

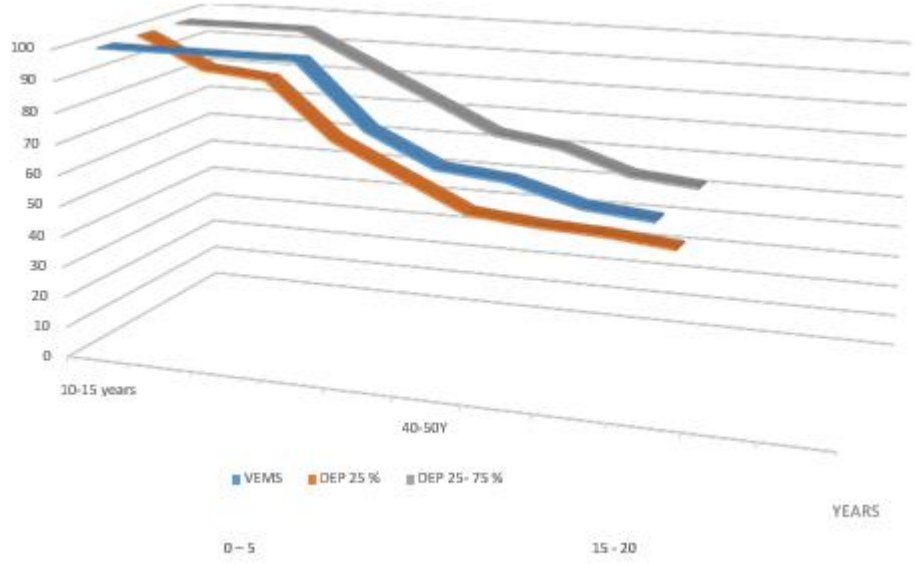
Interest of the Study

1. The purpose of this screening: early detection avoids complications of COPD post smoking.
2. Who was screened?
    a. Smokers between 15 to 60 years old,
    b. Male smokers of all ages (female is excluded from this study for social reasons)
3. Way to screen: evaluation of variation in distal flow rates in smokers by spirometry; the parameters evaluated are: DEP 25%, DEP 50 %, DEP 25 – 75 % and FEV1.
4. Allows us to track the gradual and insidious alteration of distal flow rates.

Graph

Illustration of the variations of the parameters of the volume flow loop:

We observe on the graph the progressive and decreasing character of the flow rates and pulmonary volumes in heavy smokers. Thus, the DEP 25% seems the first parameter which deteriorates, the DEP 25-75% and remains compensated for a long time, the decline in FEV1 sign proximal involvement.



Material and Method

We carried out a retrospective double-blind study analyzing 1245 cases of smokers of all ages.

- Sex female excluded for reasons of social habits.

-Number of packages = 1 pack per day.

- duration 10 to 60 years of smoking.

- This analysis consists: make spirometry for our harvested smokers

Result

- A progressive limitation of DEP 25 % appears at first in 4,5 % of smokers between 10 and 15 years of smoking
- On the other hand, the average 25- 75 % remains stable until 25 to 30 years of smoking in 63 % of smokers.
- As well as the FEV1 remains stable for a long time and begin to decline from 25 to 30 years of smoking in 73 % of smokers.

Discussion

According to this study we notice that:

- The 25 % DEP is early altered and rarely isolated (seen in 4,5 % of smokers
- The 25- 75 % DEP and FEV1 remain stable for a long time (remain stable in 87% after years of smoking)

Therefore, to make early detection of the smoking COPD which avoids the initial frightening complications of the affection the distal spirometry appears a reliable and simple examination inexpensive and which could inform us on the initial state of the peripheral airways disorders caused by smoke tobacco.

The initial demonstration of the limitation of DEP25 % and where from their average DEP 25-75 % seems by far a logical reflection that allows us to appreciate the limitations of the distal airflow and make early diagnosis of the disease in question, on the other hand, the FEV1 remains a parameter of appreciation of the gravity of the disease and not of its diagnosis.

Conclusion

Tobacco smoke occupies a large place in the genesis of COPD its course and avoids its complications but it is not the direct cause of COPD, the social factor and the antigenic structures of each play a considerable role in the genesis of smoking COPD.

Distal spirometry remains a benchmark examination for screening.

QUITTING SMOKING AND THE ONLY WAY TO AVOIDS SMOKING COPD.

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6.Diagram EXEL not subject to copyright.

7.PICTURE / Post quit smoking Google junary 2020

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