SUMMARY

SUMMARY AND CONCLUSION

Smoking habit is known to be a major risk factor for ischaemic heart diseases. The resasons, however for this association are not always clear.

In recent years, it has been increasingly recognized that alterations in blood itself, particularhy, in its flow properties, have an important pathological role.

Therefore, the aim of the present work is to study the acute and chronic cigarette smoking effects on blood viscosity and some of its major determinants in adult male active and passive smokers.

The study included 30 subjects, falling into two equal groups:

A) Group I:

(= control group = passive - smokers) 15 adult male non- smoker, from whom blood samples were taken before and 10 minutes after exposure to cigarette smoke.

B) Group II:

(Chronic smokers) 15 adults male chronic smokers, from whom blood samples were taken before and 10 minutes after smoking 2 cigarettes (within 30 minutes).

All samples were subjected for investigation of the following haematological parameters:

1 - Hb concentration

2 - RBCs count

3 - Hct value

4 - MCV

5 - ESR

6 - WBCs count

7 - Osmotic fragility of erythrocytes

8 - Relative blood viscosity

9 - Relative plasma viscosity

10- Total plasma protein concentration

11- Different plasma protein fractions

Results of the present work show that smoking has no significant acute effect on parameters measured. This effect appears in both smokers and non- smokers, passively exposed to smoke. However, the lack of significant acute effect of smoking on different parameters may be related either to the short period between smoking and sampling or to the small smoking dose.

However, comparison between basal concentrations of different parameters of smokers and non- smokers shows that there are significant elevations in the levels and concentrations of Hb, RBCs count, Hct, ESR,

WBCs count, relative blood and plasma viscosity and fibrinogen in chronic heavy smokers. On the other hand, the other parameters were not significantly altered.

In conclusion, it has been demonstrated that chronic cigarette smoking induces different haemorheologicla abnormabties. This impairment in blood flow properties is considered one of the most important factors responsible for the pathogenesis of ischaemic heart diseases and peripheral vascular disorders observed in smokers. This, in turn, clends further support to the argument of stopping smoking immediately following any ischaemic or thrombotic events.

It could be further suggested that smoking should be prohibited before blood sampling for biochemical or haematological analysis and generally prohibited in the sampling room.