SUMMARY AND CONCLUSION

Cigarette smoking may affect the male reproduction through its effects on hormonal levels, elevation of seminal plasma cadmium level and many other effects by exactly unknown mechanisms.

We aimed by this study to evaluate the effects of cigarette smoking on male reproduction through its effects on both semen parameters and α-1,4-glucosidase activity.

56 adult males were chosen and classified into smokers group (44 adult males) and non smokers group (12 adult males). The smokers smoked 20 cigarettes per day for at least 10 years.

The whole individuals were subjected to:
- Through history and clinical examination.
- Semen analysis.
- Measurement of α-1,4-glucosidase enzyme activity (as a marker of epididymal function).

Statistical analysis of the results was done using the student's \( t \) test and showed that:

1- Volume of the ejaculate showed no change with cigarette smoking.
2- Sperm count showed a dose dependent decrease in smokers.
3- Sperm motility and percentage of sperms with forward progressive motility showed a dose dependent decrease in smokers.
4- The percentage of sperms with abnormal form showed significant increase in smokers compared to non smokers.

5- The percentage of dead sperms showed a dose dependent increase in smokers.

6- The activity of a-1,4-glucosidase enzyme showed a dose dependent decrease in smokers.

To conclude:

■ Cigarette smoking is associated with decreased semen quality.
  • Cigarette smoking impairs the functional ability of the epididymis.
  • Although smokers as a group may not experience reduced fertility, men with marginal semen quality who wish to have children may benefit from stopping smoking.
  • Smokers with marginal semen quality may be pushed into the infertile range.

To recommend that:

Further studies aiming at clarifying the mechanisms through which smoking impairs the male reproductive functions are needed.