**Original article:**

**Effect of cigarette smoking on morphological characteristics of sperm**

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**Abstract:**

**Background:** Our aim was to study the cigarette smoking and its correlation with human semen quality

**Material and methods:** 300 male volunteers of age group 21 to 40 years, including 150 smokers and 150 nonsmokers were recruited for the study, following stringent exclusion criteria. Smokers further divided into subgroups according to number of cigarettes smoked per day as mild (≤10), moderate (11-20) and heavy smokers (≥ 21). Sperm motility and morphology were studied according to WHO manual.

**Results:** Statistical analysis using ANOVA test showed that smokers had significantly lower percentage of spermatozoa with motility (grade ‘a’ and ‘b') and morphologically normal form. The percentage of sperms with head defects, midpiece defects and tail defects were also significantly higher in smokers (P<0.0001). These parameters were worse in the heavy smoking groups.

**Conclusion:** There is inverse dose response relationship between cigarette smoking and sperm quality.

**Key words:** cigarette smoking, sperm motility and morphology