



## STUDY TO DETERMINE RISE IN BLOOD PRESSURE IN DENTISTS WHILE PERFORMING SINGLE VISIT ENDODONTIC THERAPY IN MOLARS

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**ABSTRACT** Dental profession affects both the physical and psychological health of practitioners. To enjoy satisfying professional and personal lives, dentists must be aware of the importance of maintaining good physical and mental health. A large part of effective practice management is understanding the implications of stress. Increase in blood pressure while performing dental treatment is of great significance in assessing the risk in development of lifestyle diseases in Dental professional. This study was conducted to analyze the change in blood pressure of dentists while performing root canal treatment.

**KEYWORDS :** Occupational stress, Blood Pressure, Lifestyle changes

**Introduction-** Lifestyle diseases explains at least half of all premature deaths in world. Risk factors for this includes– Smoking, High BP, obesity, stress, depression etc. Lifestyle Diseases are day by day increasing in India making India capital of diseases like Hypertension and Diabetes. So, to analyze the effect of stress while performing root canal treatment on a dentist this study was conducted by measuring the systolic and diastolic blood pressure before and during the procedure<sup>1</sup>.

**Inclusion Criteria-** All dentist routinely practicing endodontics without a known history of hypertension.

**Exclusion Criteria-** Dentists with known history of hypertension.

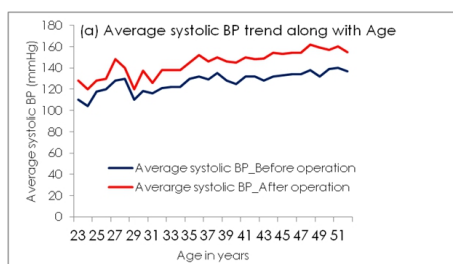
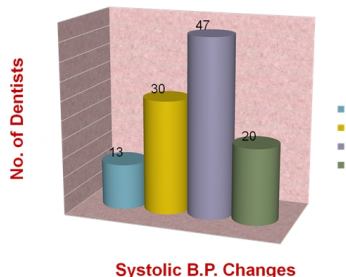
#### Materials:

1. Sphygmomanometer
2. Stethoscope

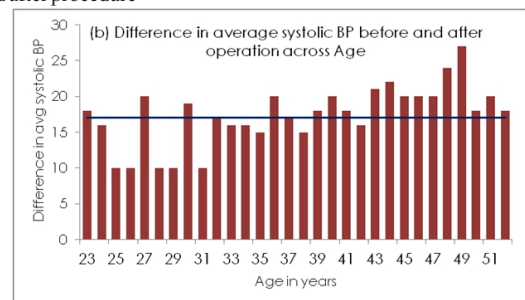
#### Methodology:

In absence of any prior information in Indian as well as International context, a pilot study on 110 dentists was performed and measures were obtained. Medical history, Drug history, Family history were taken. Baseline blood pressure before performing endodontic treatment was recorded. After completion of endodontic treatment blood pressure was measured again.

#### Observation & Results:



Average systolic BP shows increasing trend with age for both before and after procedure



The difference in average systolic BP increases with age.

The difference in systolic BP is statistically significant ( $p < 0.0001$ ) using paired t-test. The overall average increase in systolic BP across age is 17 mmHg. For age beyond 40 yr, the average increase is above the overall average i.e. 17 mmHg.

#### Clinical Relevance-

Hypertension is a twenty first century epidemic. Hypertension or high blood pressure is a condition characterized by transitory or sustained elevation of systemic arterial blood pressure to a level likely to induce cardiovascular damage or other adverse consequences. As most of the affected people do not experience any symptoms, high blood pressure is often referred to as the 'silent killer'. Systolic blood pressure is superior to diastolic blood pressure in predicting cardiovascular risk in middle-aged and older adults.

Health risks of high blood pressure are-Brain damage  
Heart and kidney disorders  
Eye damage

Although the changes in diastolic blood pressure values are not significant, changes in systolic blood pressure showed that single visit endodontic treatment can induce stress in dentists.

Dentists may be at risk of developing lifestyle diseases such as hypertension and cardiovascular diseases owing to the stress induced while performing dental procedures such as single visit endodontic treatment<sup>2</sup>.

However, large scale studies need to be carried out before we come to any conclusion. To enjoy satisfying professional and personal lives, dentists must be aware of the importance of maintaining good physical and mental health<sup>3</sup>. A large part of effective practice management is understanding the implications of stress.

**REFERENCES :**

- 1) Alina Puriene, Vilija Janulyte, Margarita Musteikyte, Ruta Bendinskaite, General health of dentists. Literature review, Stomatologija, Baltic Dental and Maxillofacial Journal, 9:10-20, 2007
- 2) Blanca Elizabeth Pozos Radillo, Teresa Margarita Tórréz López, Stress-associated factors in Mexican Dentists, Braz Oral Res 2008;22(3):223-8
- 3) Frank E. Ritter, Rachel Ceballos, Measuring the Effect of Dental Work as a Stressor on Cognition; Technical Report No. ACS 2005-1;13 July 2005