



Hypertension in Dentistry

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ABSTRACT:

Hypertension is a chronic condition that affects all the people around the world. When treating dental patients, the significant prevalence of the condition in the population should be taken into consideration.

By assessing preoperative blood pressure readings, dentists can avoid adverse hypertensive complications. Dentistry's approach to managing hypertension includes diagnosing the condition and taking the appropriate measurements, as well as taking appropriate action to address any oral side effects and any risks that may arise during dental work.

It is crucial for dentists to be well versed on hypertension, its problems, and methods of treatment and management.

Keyword: hypertension, dentist, dental management

Introduction :

Hypertension is the serious medical condition which forces the blood against the arterial wall which increases the risk of heart, kidney, brain. Hypertension is defined as the values > 140 mm Hg SBP or >90 mmHg DBO. Patient of prehypertension are increased risk of developing hypertension. Hypertension is a chronic disease that is often dubbed the "silent killer" as it rarely causes symptoms, but simultaneously it is an independent risk factor for coronary heart disease, stroke, renal disease, peripheral arterial disease, and vascular cognitive impairment(1)..

Etiology and Classification of Hypertension:

Hypertension is classified as primary hypertension and secondary hypertension. Primary hypertension are also called as essential hypertension.

1). Primary or Essential Hypertension:

Primary Hypertension occurs when you have abnormal high blood pressure which is not a result of medical conditions .Hypertension which are idiopathic in some cases are also known as essential hypertension. The salt intake increase increases the risk of decreased hypertension (2)

2) Secondary Hypertension:

Secondary Hypertension is high blood pressure that is caused by another medical condition. It is resistant to anti hypertensive drugs. It is present in early end organ dysfunction ,hypertension crisis at younger events. Patient with secondary hypertension are the patient with resistant hypertension which is defined as uncontrolled hypertension . The patient should practice healthy lifestyle and must visit physician on a regular basis .

Pathogenesis :

There are various known factors which increases blood pressure .Some of the most important are(3) (4)

1. Age (over 55 years for men)
2. A family history of premature cardiac diseases;
3. Smoking tobacco
4. Alcohol consumption
5. Diet rich in cholesterol
6. Presence of other diseases (diabetes, obesity)

Significance Of Hypertension in Dentistry :

- One adverse effect of significance of hypertension seen in dental clinic is postural hypotension with patients taking terazosin(alpha receptor blockers), thiazides,, monitoring of the patients getting out of the dental chair, therefore becomes essentials. Raise patients slowly from supine position, raising suddenly the patient may result in loss of consciousness.(5)
- Patients which are on ACE inhibitors show problems such as dry cough during the dental treatment which affect the treatment procedure. Dry cough result in accumulation of bradykinin ,in the bronchial mucous.
- Tooth extraction is the most common causes of dental anxiety and pain, which elevates the blood pressure (BP) and heart rate.
- Local anaesthesia can affect blood pressure. Epinephrine is the local anaesthesia which are used in dental procedures .This LA works by administering it to the required surface which helps the blood vessels to constrict so that it can keep you out of pain on the other hand it raises the blood pressure
- High blood pressure can lead to excessive bleeding during dental surgeries. History of the patients plays a major role before performing any procedure in hypertensive patients to avoid any mishap.(6)

Blood pressure value and the risk assessments during dental procedures :

Studies have shown that there is no risk for adverse outcomes of patients who have undergone dental surgery with a blood pressure <180/110mmHg. Those patients who have histories of organ damage related to hypertension which includes myocardial infarctions , strokes has a high risk for this particular subset to undergo surgery .In case of emergency judgement should be used for treatment of patients.(7)

Dental Treatment of Hypertensive Patients :

It is very important for dentists to be aware of the complications and consequences of medications used during dental treatment or treatment. Antihypertensive drugs have some side effects such as decreased salivation, xerostomia, drugs administered during treatment. overgrowth of gums. Patients with severe hypertension should always be under medical supervision before starting any dental treatment after anxiolytic medication and blood pressure lowering.(8) [9]

Oral Manifestation of Adverse Effect of Hypertensive Drugs:

Dry cough - Patients on ACE inhibitors shows problem of dry cough during the dental treatment. Once ACE inhibitors are eliminated the cough disappears within the week.

Lichenoid reaction- The onset of oral lichenoid drug reactions is seen as they administer medications, especially antihypertensive drugs, , antimalarial drugs. Many of the patient experiences pain or a burning sensation when eating spicy food. Antihypertensives-ACE inhibitors, Beta-blockers, Nifedipine,. Diuretics -hydrochlorothiazide, Frusemide, Spironolactone [10].

Alteration in taste - Angiotensin-converting enzyme inhibitors such as captopril Capoten are most commonly associated with taste disturbances includes decreased sense of taste, and sudden bitter or sweet taste. Changes in taste are not common when used diuretics, hydrochlorothiazide and chlorthalidrone[11].

Xerostomia - Many antihypertensives medications like , thiazide diuretics, loop diuretics are associated with xerostomia [12-15] .Xerostomia can lead to decay, chewing problems ,dysphagia , dysarthria. Xerostomia should be treated directly with parasympathomimetic agents such as pilocarpine . For reducing the risk of caries topical applications of fluoride in the form of gels is applied by brush or trays [16].

Conclusions:

It is the duty of the dental clinician to inform the patient of their hypertensive state and to offer medical advice. Given the possible oral manifestations of hypertension and the emergency in surgical procedures, it is important that dentists assess the impact of diseases. The recommendation for managing these dental patients is mainly based on our judgments as a dental practitioner. Before providing care to these patients, the dentist should be able to assess patient health history and also the present status and make proper decisions and should look forward to some major factors such as : baseline blood pressure, urgency of the procedure, functional and physical status and the required time of the procedure. Most importantly, medical advice should be considered. The health of the patient must always come first.

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