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Awareness about Medicinal Application of Cinnamomum Verum among Dental Students

Kethan Umakanth[1], Ashika Arul[2], Dhanraj Ganapathy[3*]

[1]Undergraduate student, Department of Prosthodontics, SaveethaDentalCollege and Hospitals, Saveetha Institute of Medical and Technical Sciences, India
[2]Tutor, Department of Prosthodontics, SaveethaDental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, India
[3]Professor &Head of Department, Department of Prosthodontics, SaveethaDental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, India, dhanrajmganapathy@yahoo.co.in

Introduction: Cinnamomumverum (Cinnamon)is a therapeutic plant which has many medical applications. Cinnamon's most significant compounds are cinnamaldehyde as well as transcinnamaldehyde, that are found mostly in the essential oil and thus contribute to the aroma and the varied biochemical activity found with cinnamon. Aim: This survey was conducted for assesing the awareness about medicinal application of Cinnamomumverum amongst dental students. Materials and method: A cross-section research was conducted with a self-administered questionnaire containing ten questions distributed amongst 100 dental students. The questionnaire assessed the awareness about Cinnamomumverumtherapy in medical applications ,their anti oxidant properties, antiglycaemic applications,anti microbialapplications,antialzeimer ,anti hypertensive and anti inflammatory activity. The responses were recorded and analysed. Results: 23% of the respondents were aware of the medicinal applications of Cinnamomumverumtherapy. 19 % were aware of anti-oxidant properties of Cinnamomumverumtherapy, 17 % were aware of anti-glycaemic properties of Cinnamomumverumtherapy, 15 % were aware of anti-microbial properties of Cinnamomumverumtherapy,14% were aware of antihypertensive properties of Cinnamomumverumtherapy, and, 10 % were aware of anti-inflammatory properties of Cinnamomumverumtherapy. Conclusion: There is limited awareness amongst dental students about use of Cinnamomumverum therapy in medical applications. Enhanced awareness initiatives and dental educational programmes together with increased importance for curriculum improvements that further promote knowledge and awareness of Cinnamomumverum therapy.

Keywords: Awareness, Cinnamomumverum, students, medicinal.

1. Introduction

Cinnamomumverum (Cinnamon)is a therapeutic plant which has many medical applications.

Cinnamon's most significant compounds are cinnamaldehyde as well as transcinnamaldehyde, that are found mostly in the essential oil and thus contribute to the aroma and the varied biochemical activity found with cinnamon.

A research on Cinnamomumosmophloeum (C. osmophloeum) revealed that a high amount of cinnamon aldehyde is present in the essential oil via cinnamon leaves. Accordingly C. Even osmophloeum has been used as an alternate ingredient to C. Cassia. Cassia. One of the primary constituents of C- extracted essential oil. Zeylanicum labeled (E)-cinnamaldehyde provides antityrosinaseactivity[6] whereas cinnamaldehyde is the primary component accountable for such activity[1-7]Cinnamon bark comprises procyanidins and as well as catechins[8]. Procyanidin different components include both A-type procyanidine and the B-type connections[9–11]. These cinnamon- and berries-extracted procyanidins do have antioxidant effects[10, 12].

As well as being utilized as a seasoning and flavoring agent, cinnamon also is incorporated to the taste of chewing gums because of its soothing effects on the mouth and ability to prevent bad breath. Cinnamon could also lower the risk of colon cancer. Cinnamon is often a coagulant that protects against bleeding. Cinnamon also improves the movement of the blood with in uterus and regenerates tissue. This herb plays a very important role as spice, but also has critical functions with its essential oils as well as other components, particularly antibacterial, antimicrobial, antioxidant and also antidiabetic activity.

Cinnamon has been used as an anti - inflammatory drug, antitermic, nematicidal, bactericidal , insecticide, antimycotic, and antimutagenic agent. Typically, cinnamon is also being used as tooth paste as well powder and also to relieve toothaches, dental disorders, oral ulcers and bad breath[12-17]This survey was conducted for assesing the awareness about medicinal application of Cinnamomumverum amongst dental students.

2. Materials and method

A cross-section research was conducted with a self-administered questionnaire containing ten questions distributed amongst 100 dental students. The questionnaire assessed the awareness about Cinnamomumverumtherapy in medical applications ,their anti oxidant properties, antiglycaemic applications,anti microbialapplications,antialzeimer ,anti hypertensive and anti inflammatory activity. The responses were recorded and analysed.

3. Results

23% of the respondents were aware of the medicinal applications of Cinnamomumverumtherapy (Fig 1). 19 % were aware of anti-oxidant properties of Cinnamomumverumtherapy (Fig 2), 17 % were aware of anti-glycaemic properties of Cinnamomumverumtherapy (Fig 3), 15 % were aware of anti-microbial properties of Cinnamomumverumtherapy (Fig 4),14% were aware of antihypertensive properties of Cinnamomumverumtherapy (Fig 5) and ,10 % were aware of anti-inflammatory properties of Cinnamomumverumtherapy (Fig 6).

Fig 1: Awareness of the medicinal applications of Cinnamomumverumtherapy

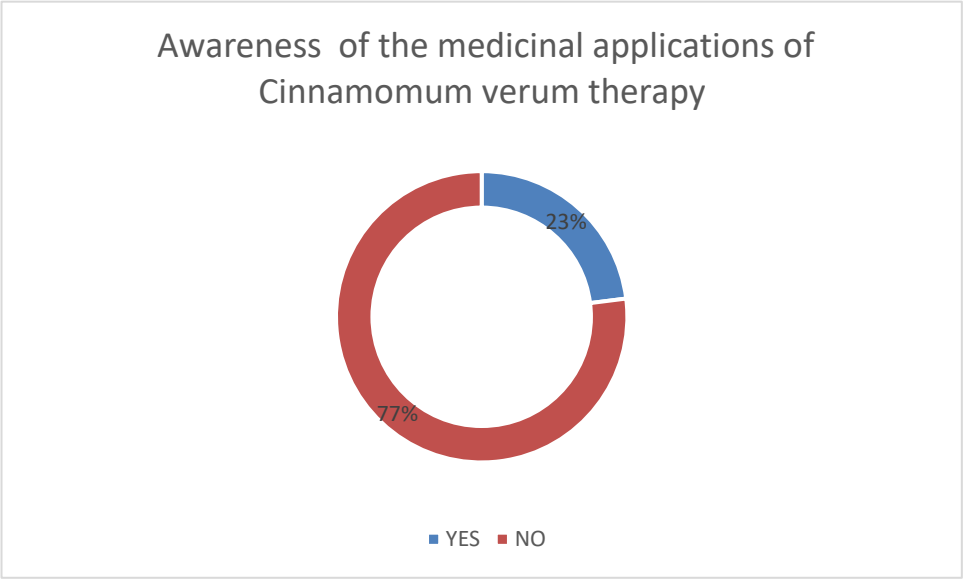


Fig 2: Awareness of the anti oxidant properties of Cinnamomumverumtherapy

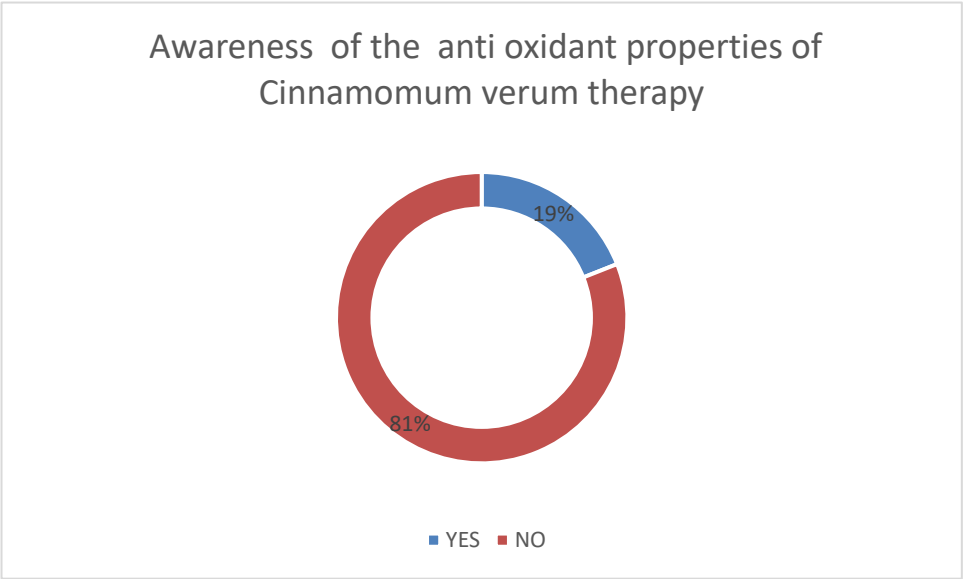


Fig 3: Awareness of anti glycaemic properties of Cinnamomumverumtherapy

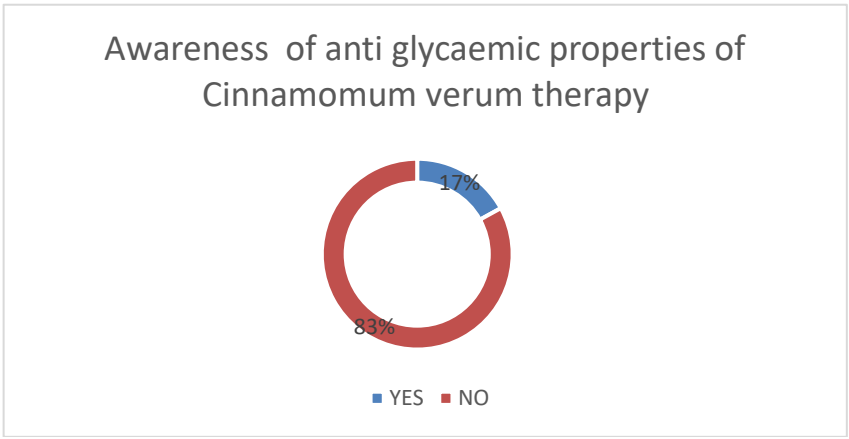


Fig 4: Awareness of anti microbial properties of Cinnamomumverumtherapy

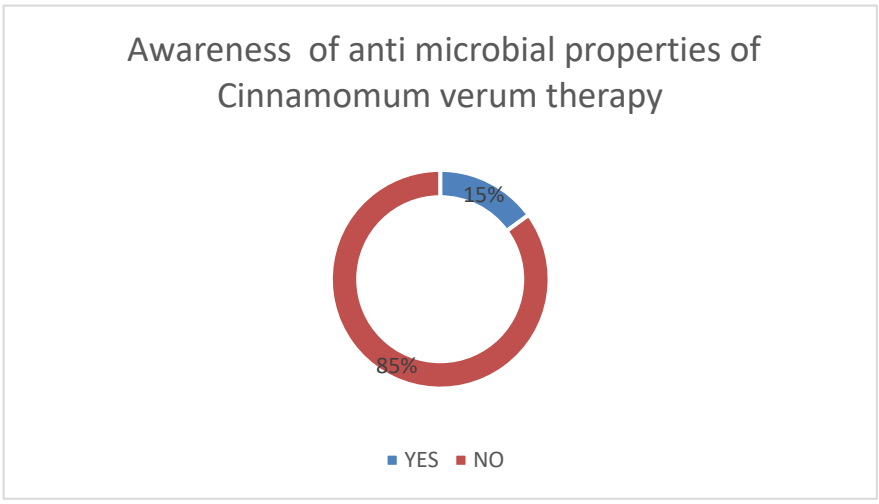


Fig 5: Awareness of antihypertensive properties of Cinnamomumverumtherapy

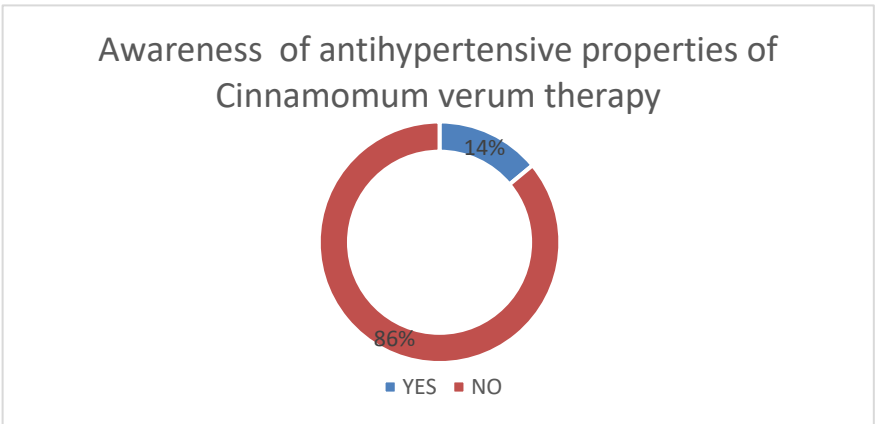
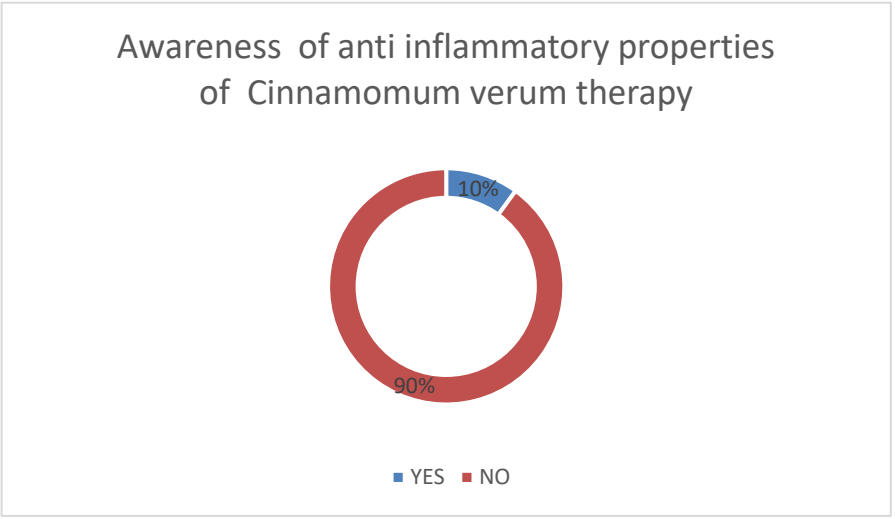


Fig 6: Awareness of anti inflammatory properties of Cinnamomumverumtherapy



4. Discussion

Antioxidants were considered a vital factors of human development and life as they react to reactive oxygen species and destruction in metabolic disorders including human age-related syndromes. Mancini-Filho et al .identified assorted extracts of cinnamon, like the ether and methanol extracts, which had demonstrated substantial antioxidant activity[18]. The cinnamon's aqueous and ethanolic extract (1:1) theoretically substantially reduces in vitro fatty acid oxidation and lipid peroxidation[19].A group of researchers stated that cinnamon oil likely demonstrates superoxide-dismutase- (SOD-) related behavior as suggested by impairment of pyrogallol autoxidation hindering capacity[20]. Various cinnamon-insulated flavonoids have free-radical-scavenging actions as well as antioxidant properties[21].

Several research on medicinal herbs and their components are suggestive of cinnamon's anti-inflammatory activity[22,23]. Number of studies have demonstrated the anti-inflammatory effects of cinnamon and its essential oils as well. A previous study found that 2 - hydroxycinnamaldehyde extracted from C. Cassia bark demonstrated an inhibitory activity on nitric oxide production by suppressing the stimulation of the kappa-light-chain-enhancer nuclear factor of activated B cells (NF-ÿB) implying that such a substance may effectively usedas anti-inflammatory agent[24].

Cinnamophilin is a new, endogenous antagonist of receptor thromboxane A2.C,p hilippines.One study reported that when delivered at 80 mg / kg at various time intervals (2, 4, and 6 h) after insult, cinnamophilin provides protection against ischemical damage in rat brains. The effects on shortened brain infarction were found to have a significant effect (by 34–43 per cent) and further enhance neurobehavioral outcomes. Among laboratory rats, cinnamophilin also significantly compresses the oxygen and glucose-mediated neuronal damage among organotypic hippocampal slices[25,26].

A natural product separated from the cinnamon extract considerably inhibits the levels of

toxicant β-amyloid polypeptide (Aβ) oligomers and inhibits neuronal pheochromocytoma (PC12) cells from becoming toxic.Another analysis suggested the aqueous extract of C.zeylanicum,minimizes Tau aggregation as well the filament formation , two of the principal characteristic of Alzheimer's. The extract may also promote the absolute disintegration of recombinant tau filaments and enable the structure of mated helical filaments from Alzheimer's disease brain tissue to be considerably changed, suggesting the ability of cinnamon in the management of Alzheimer's disease[27,28].

A compound from cinnamon was extracted and labeled as a "insulin-potentiating factor" (IPF), whereas the antidiabetic actions of cinnamon bark were seen in diabetic rats caused by streptozotocin. Many studies also revealed that cinnamon extracts besides decreasing blood glucose levels ,furthermore lower cholesterol levels[29,30].

The prospects of herbal medicines in the management of oral and other diseases are promising, with potential applications in antimicrobial therapy, anti-inflammatory treatment, wound healing, pain relief, and preventive care. [31-35]As research continues to validate the efficacy and safety of these natural remedies, herbal medicines may become increasingly integrated into mainstream oral healthcare, offering patients effective, natural, and holistic treatment options.

5. Conclusion

There is limited awareness amongst dental students about use of Cinnamomumverum therapy in medical applications. Enhanced awareness initiatives and dental educational programmes together with increased importance for curriculum improvements that further promote knowledge and awareness of Cinnamomumverum therapy.

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