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Probiotic awareness among general dentists in Chennai

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Abstract

Aim: To assess the awareness of probiotic among general dentists in Chennai.

Materials and Methods: A cross sectional survey was conducted among 100 general dental practitioners through a questionnaire about the awareness of probiotics and its effects and usage.

Result: All the participants were aware of probiotics but the awareness about its constituents, benefits and usage was considerably less. Though majority of the participants were aware of the benefits of probiotics almost one third of them did not prescribe.

Conclusion: Though beneficial, lack of adequate knowledge regarding probiotics limited its usage among general dentists in Chennai.

Introduction

Probiotics are dietary supplements containing potentially beneficial bacteria or yeasts. They are safe for human consumption and, when ingested in sufficient quantities, have beneficial effects on human health, beyond basic nutrition. As early as 1907, Elie Metchnikoff, a Nobel Prize winner, observed the beneficial effect of lactic acid bacteria in humans, as a result of consumption of fermented dairy products. His observations brought the concept of Probiotics to limelight. The term Probiotic is derived from Greek meaning 'for life'. The Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) have stated that there is adequate scientific evidence to indicate that there is potential for probiotic foods to provide health benefits and that specific strains are safe for human use. An expert panel commissioned by FAO and WHO in the year 2001, defined probiotics as "Live microorganisms which when administered in adequate amounts confer a health benefit on the host."

To be called a probiotic, a bacterial strain must be fully characterized. An ideal probiotic preparation should have the following characteristics:

- High cell viability, and thus, they must be resistant to low pH and acids
- Ability to persist in the intestine even if the probiotic strain cannot colonize the gut
- Adhesion to the gut epithelium to cancel the flushing effects of peristalsis
- They should be able to interact to send signals to the immune cells associated with the gut
- They should be of human origin
- Should be non-pathogenic
- Resistance to processing
- Must have the capacity to influence local metabolic activity.

Microorganisms that are considered to be probiotics mainly belong to the genera *Lactobacillus* and *Bifidobacterium*. Lactobacilli and bifidobacteria are "friendly" bacteria, which means that they normally occur in the human gastrointestinal and genitourinary tracts and thus play important roles in promoting overall health.

Numerous trials have warranted the beneficial effects of probiotics. Probiotics strengthen the immune system to combat allergies, stress, exposure to toxic substances and other diseases. There are reports of beneficial use in HIV infections and cancers. Presently only a small percentage of physicians either know or completely understand the potential benefits of probiotics in patient care. The awareness and prescription of probiotics are significantly low in India when compared to western countries.

Several dental pathological conditions necessitates the use the either short term or long term antibiotics. Supplemental probiotics along with the necessary antibiotics could reduce the adverse effects of the latter stimulating oral health promoting flora, and suppress the pathologic colonization and disease spread. Thus the aim of this study is to assess the awareness of probiotic knowledge, benefits and potential usage among general dental practitioners in city of Chennai, India.

Materials and Methods

A cross sectional survey was carried out on one hundred general dental practioners, practicing in different areas of Chennai, India in June 2015. The participants were full time dental practioners and were not associated with any academic institution. Informed consent was obtained from all participants.

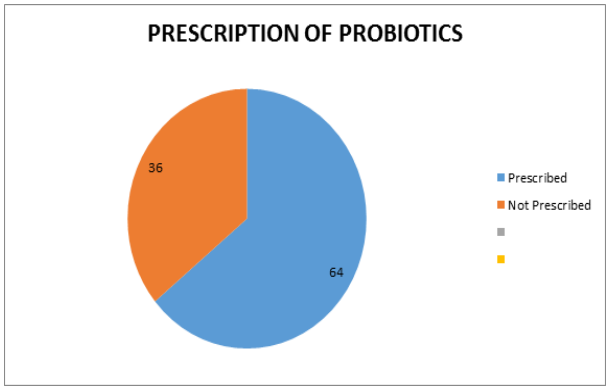
Data were collected through a structured questionnaire. Likert scale was used to record the response of the participants.

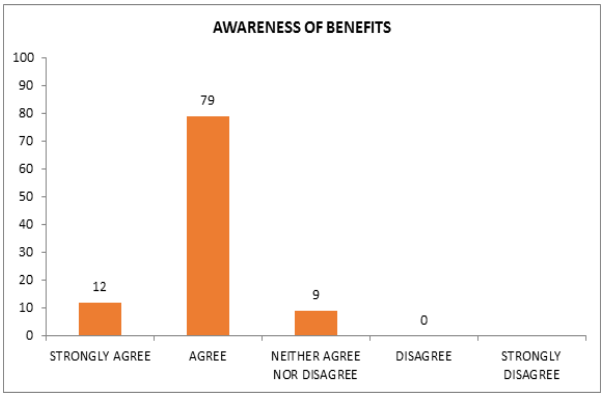
Results

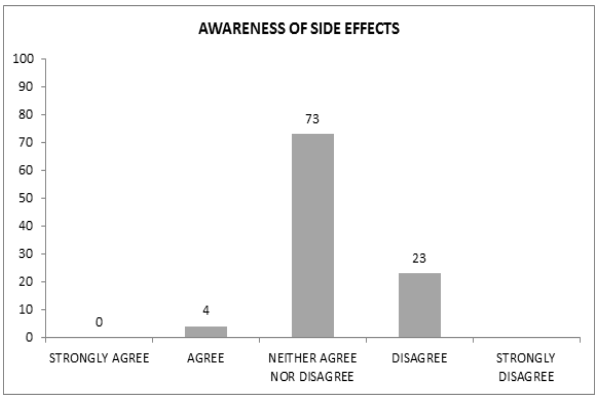
The age of the participants ranged from 24 – 71 with the average age being 37 including 59 male and 41 female. Their experienced ranged from 5 months to 47 years with a majority of the participants – 41% having an experience of more than 15 years followed by 28% of participants with experience between 11 – 15 years, 22% had an experience between 6 – 10 years and 9% less than 5 years of clinical experience.

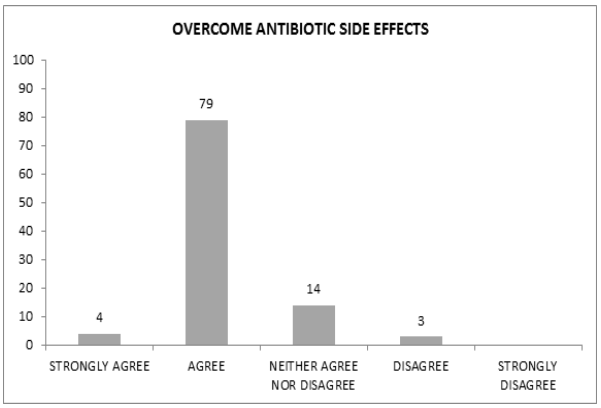
81% of the participants practiced in private setting while 19% were associated with hospitals. None of them were associated with any academic institutions. 92% of the participants had adults as majority of their patient population while 8% had children as majority.

All the participants were aware of the term probiotic while 78% knew it's constitute. 66% of the participants had prescribed probiotics before.









83% of the respondents agreed that lack of adequate information is the barrier to its prescription and 91% agreed that they would benefit from education and training related to use of probiotics. 81% neither agreed nor disagreed that effects of probiotics vary by their strain.

Discussion

Many clinical trials have supported the evidence of Potential benefits of probiotics such as prevention of colon cancer, lowering cholesterol, lowering the blood pressure, managing lactose intolerance and *Helicobacter pylori*, improving the immune function, preventing infections and antibiotic-associated diarrhoea, reducing inflammation, improving the mineral absorption, preventing harmful bacterial growth under stress, irritable bowel syndrome, and colitis, and managing urogenital health.

Our study was aimed at the awareness of probiotic and its benefits among general dental practioners. We included general dental practioners those are not associated with any academic institution as they are not exposed to the updates in the field on day to day basis.

This survey revealed that the general dental practitioners are aware of probiotics but a considerable percentage (22%) was not aware of its constituents. Out of the 22 participants who were not aware of its constituents 19 of them were above 55 years of age implying that the knowledge of probiotics is more in younger age groups.

Though all of the participants are aware of probiotics and a majority of them (79%) agree that it is beneficial only 64% of them prescribe. On further questioning of certain willing participants about not prescribing probiotics it was revealed that the reasons are lack of adequate information on probiotic and its usage, additional expense to the patients and also the antibiotics prescribed to the patients were only for a short term. 79% of the participants agreed that the probiotics overcome the side effects of antibiotics, the most common being amoxicillin associated diarrhoea.

Probiotics are viable organisms, and therefore it is feasible that they could infect the host. 73% of the

participants neither agree or disagree that probiotics have side effects which reflects which reflects the lack of pharmacological knowledge thus justifying education and training related to use of probiotics in practice which was also agreed by 91% of the practitioners.

Conclusion

To summarise, General dental practitioners of Chennai – a metropolitan city, the state capital of Tamil Nadu are aware of the concept of probiotics. Even though majority of them are familiar with the benefits of probiotics their usage is limited due to the lack of adequate pharmacological knowledge of probiotics. With appropriate education, training and updates about the same will help is increased prescription of the probiotics thereby benefiting the patient.

References

1. Reid G, Jass J, Sebulsky M, McCormick J. Potential Uses of Probiotics in Clinical Practice. Clinical Microbiology Reviews. 2003;16(4):658-672.
2. Kathuria N, Goyal G, Shetty S, Shah D, Bhatia V, Abraham J. A study to find the status of probiotics in New Delhi, India and review of strains of bacteria used as probiotics. Journal of International Society of Preventive and Community Dentistry. 2014;4(4):18.
3. Nichols J, Grob P, Roche N. A web questionnaire to determine the advice general practitioners give on probiotics. Journal of Nutritional and Environmental Medicine. 2005;15(4):212-222.
4. Meurman J. Probiotics: do they have a role in oral medicine and dentistry? European Journal of Oral Sciences. 2005;113(3):188-196.
5. Anukam K, Osazuwa E, Reid G. Knowledge of probiotics by Nigerian clinicians. International Journal of Probiotics and Prebiotics. 2015;1(1):57-62.
6. Stanczak M, Heuberger R. Assessment of the Knowledge and Beliefs Regarding Probiotic Use. American Journal of Health Education. 2009;40(4):207-211.
7. D'Souza A. Probiotics in prevention of antibiotic associated diarrhoea: meta-analysis. BMJ. 2002;324(7350):1361-1361.
8. Stanczak M, Heuberger R. Assessment of the Knowledge and Beliefs Regarding Probiotic Use. American Journal of Health Education. 2009;40(4):207-211.
9. Videlock E, Cremonini F. Meta-analysis: probiotics in antibiotic-associated diarrhoea. Aliment Pharmacol Ther. 2012;35(12):1355-1369.
10. Newberry S. Probiotics for the Prevention and Treatment of Antibiotic-Associated Diarrhea. JAMA. 2012;307(18):1959.
11. Narwal A. Probiotics in Dentistry â€ "A Review. Journal of Nutrition & Food Sciences. 2011;01(05).
12. Mayhew M. Probiotics. The Journal for Nurse Practitioners. 2007;3(4):272-273.
13. McBain A, Madhwani T, Eatough J, Ledder R. An introduction to probiotics for dental health. Food Science & Technology Bulletin: Functional Foods. 2009;6(2):5-29.
14. Kathuria N, Goyal G, Shetty S, Shah D, Bhatia V, Abraham J. A study to find the status of probiotics in New Delhi, India and review of strains of bacteria used as probiotics. Journal of International Society of Preventive and Community Dentistry. 2014;4(4):18.
15. L P, Z N, R M, M A. Perceptions of medical sciences students towards probiotics. Health Promotion Perspectives. 2012;2(1):96-102.