Mangifera Indica Plantations: Mangos for Dental Use in India

Abstract

Poor oral hygiene is a prevalent problem in India. Mango branches can act as a toothbrush and contain a chemical called mangiferin, which can act as a natural toothbrush. Information on proper dental hygiene was provided and a plan for providing and distributing mango tree branches was developed. The rate of tooth caries dropped significantly.

Background

- Poor oral hygiene affects 60-90% of school children, and nearly 100% of adults worldwide.
- As economic status declines, access to dental care becomes scarce.
- India is highly affected by Edentulousness.
- The mango tree branch can be used as an alternative to a synthetic toothbrush.

Methods/Process

- Create educational program on oral health:
  - Importance & basic methods
  - Benefits of mangiferin
  - Proper use of chewing sticks

- Create plantation of mango trees:
  - Find available land
  - Plant mango tree saplings
  - Red Cross donation of money

- Distribute mango branches:
  - Schools, health centers, markets
  - First come first serve

Rate of Edentulous in the Eastern Hemisphere

Age-standardized disability-adjusted life year (DALY) rates from Edentulism by country (per 100,000 inhabitants)

Results and Outcomes

- Brochure helpful and persuasive
- Idea culturally accepted
- Farmers and landlords agree to set aside land
- Rate of Edentulous drops significantly within the next five years

Conclusions and Recommendations

- Another test of edentulous rate five years later
  - Simple random sample of people using chewing sticks
  - Rate of tooth caries decreases

- Improvement in oral health
  - Increase number of plantations
  - Produce more chewing sticks
  - Greater range of people aided

Acknowledgments

Special thanks to research and instruction librarian Rebecca Ziino for helping with the research process and the ATC for assisting with poster design.

References