

Original Research Article

Volume 10, Issue 3 -2024

DOI: <http://dx.doi.org/10.22192/ijcrms.2024.10.03.001>

Clinical exploratory evaluation of Kandankathiri Vithai Pugai (Fumigation) in the management of Pal Sothai (Dental carries) - A case series.

M. Mohana¹, T. Lakshmi Priya² and M. Kannan³

^{1,2}PG Scholars, Dept of Puramaruthuvam, GSMC, Chennai -106

³Head of department, Department of Puramaruthuvam, GSMC, Chennai-106

Abstract

Background: Dental caries is a transmissible bacterial disease caused by acids from bacterial metabolism diffusing into enamel and dentine and dissolving the mineral. The bacteria responsible produce organic acids as a by-product of their metabolism of fermentable carbohydrates.. There are 32 types of external therapies in Siddha. Pugai is one of the external therapy in Siddha system. Globally it is estimated that 2 billion people suffer from caries of permanent teeth and 520 million children suffer from caries of primary teeth. The clinical features of dental caries can be correlated with *Palsothai* mentioned in Siddha literatures. Hence, the study evaluated the efficacy of kandankathiri pugai in management of dental carries through external application.

Study design: Descriptive study presented as case series.

Methods: Sample of 10 patients were included in the study and was administered with the trial therapy. Pain and functional scales were evaluated pre and post treatment using DMFT(Decayed, Missing, Filled Tooth)index.

Results: The average study was carried out involving a sample of 10 adults (35 to 44 years of age) DMFT(Decayed, Missing, Filled Tooth index(>14)was used to determine the severity of dental caries .Bivariate and multivariate analysis were carried out using the passion regression model with the level of significance set at 5%($p < 0.05$) and 95% confidence intervals.[2]

Conclusion: The studied cases support the conclusion that kandankathiri vithai pugai is an effective form of external therapy for patients with dental carries-Findings can be used for further elaborate studies in future in order to prove the efficacy of external therapies in treating dental carries.

Keywords: dental carries, external therapy, management, pain.

Introduction

Siddha system of Medicine is a complete holistic medical system that has been practiced in India from antient times.Its predominately practiced in south India. The Siddha System is said to have

emerged in antiquity, from the highly evolved from the siddhars.

It is mainly categorized into two classes, based on their administration of drugs which are 32 types of Aga Marunthugal (Internal Medicines)

and 32 types of PURA MARUNTHUGAL (External Medicines) for treating the 4448 diseases described in the Siddha texts.

Among them, 32 types of external medicines are included in many external treatment procedures. Pugai is one of the external treatment in Siddha system.

Dental caries is one of the most common preventable diseases which is recognized as the primary cause of oral pain and tooth loss. It is a major public health oral disease which hinders the achievement and maintenance of oral health in all age groups. It refers to the localised destruction of susceptible dental hard tissues by acidic by-products from the bacterial fermentation of dietary carbohydrates. It is a chronic disease that progresses slowly in most of the people which results from an ecological imbalance in the equilibrium between tooth minerals and oral biofilms (plaque). The biofilm is characterised by microbial activity, resulting in fluctuations in plaque pH. This is a result of both bacterial acid production and buffering action from saliva and the surrounding tooth structure. The tooth surface is therefore in a dynamic equilibrium with its surrounding environment. As the pH falls below a critical value, the demineralisation of enamel, dentine or cementum occurs, while a gain of mineral (remineralisation) occurs as the pH increases.

Primary caries can occur on different tooth surfaces. On an approximal surface, the lesion starts and forms beneath the contact area between teeth. Secondary caries is a lesion located at the margin of a dental restoration. It represents a caries lesion adjacent to the margin and there may be signs of demineralisation (wall lesions) along the cavity wall which could be a consequence of microleakage.

Caries may be characterized by the experience of pain, problem with eating, chewing, smiling and communication due to missing, discolored or damaged teeth. The microbial community of caries is diverse and contains many facultatively and obligately-anaerobic bacteria belonging to the genera Actinomyces, Bifidobacterium, Eubacterium, Lactobacillus, Parvimonas and

Rothia. Bacteroides, Prevotella, and Porphyromonas species are prevalent on mucosal surfaces.

Global scenario of Dental caries

Globally it is estimated that 2 billion people suffer from caries of permanent teeth and 520 million children suffer from caries of primary teeth.

Dental Caries are the most important global oral health problems, although conditions such as oral and pharyngeal cancers and oral tissue lesions are also significant health concern. Worldwide, approximately 2.43 billion people (36% of the population) have dental caries in their permanent teeth. The disease is most prevalent in Latin American countries, countries in the Middle East, and South Asia, and least prevalent in China. Between 29% and 59% of adults over the age of fifty experience caries.

Prevalence:

Nearly 90% of adults ages 20 to 64 years have had decay in their teeth.

Older working-age adults 50 to 64 years had the greatest prevalence.

Decay is more prevalent in people who currently smoke compared with those who never or formerly smoked.

A descriptive study -case series was carried out involving a sample of 10 adults (35 to 44 years of age) residing in metropolitan Chennai, Tamil Nadu. The DMFT (Decayed, Missing, Filled Tooth index (>14) was used to determine the severity of dental caries. Bivariate and multivariate analysis were carried out using the passion regression model with the level of significance set at 5% ($p < 0.05$) and 95% confidence intervals.

Materials & Methodology

In the present study, 10 patients were selected who are diagnosed with dental carries.

Patients were enrolled from OPD at AAGHIM diagnosed as dental carries and have been selected for "KANDANKATHIRI VITHAI PUGAI" treatment.

The diagnosis of the diseases are based on conventional criteria of dental carries (பல் சொத்தை, பல் புழு)

The patients who are enrolled are informed about the objectives of the study in the language and terms understandable to them and informed consent have been obtained in writing from them.

This procedure is continued as weekly twice for one month (4 weeks) and prognosis status is assessed based on **Dental caries Severity Index (CSI)**.

Clinical assessment is mainly assessed by reduction of clinical symptoms of pain, problem with eating, chewing, smiling and communication due to missing, discolored or damaged teeth.

Trial medicine:

Reference:

கண்டகத்திரி விதைகளை எரித்து அதனின்றி எழுகின்ற புகைப் பிடிக்க பல் புழுக்கள் சாகும்

குணபாடம் (பொருட் பண்பு நூல்)
க.ச.முருகேச முதலியார்

முதல் பாகம் -மூலிகை வகுப்பு
{பக்கம் :214}

Duration: Twice in a week for one month.

Ingredients: Kandankathiri vithai (seeds of *Solanum surattense*)

Standard operative procedure:

The above mentioned drug will be purified as in SIGITCHA RATHNA DEEPAM.

The KANDANKATHIRI VITHAI is washed in hot water, dried in the sun and subjected to fumigation and stored in a air tight container.

Study design:

Study Type: Case series

Study Centre: Arignar Anna Govt. Hospital of Indian Medicine, Attached with GSMC, Chennai.

Study Period: 3 months

Sample Size : 10 patients (OPD)

Criteria of assessment:

Dental caries Severity Index(CSI)

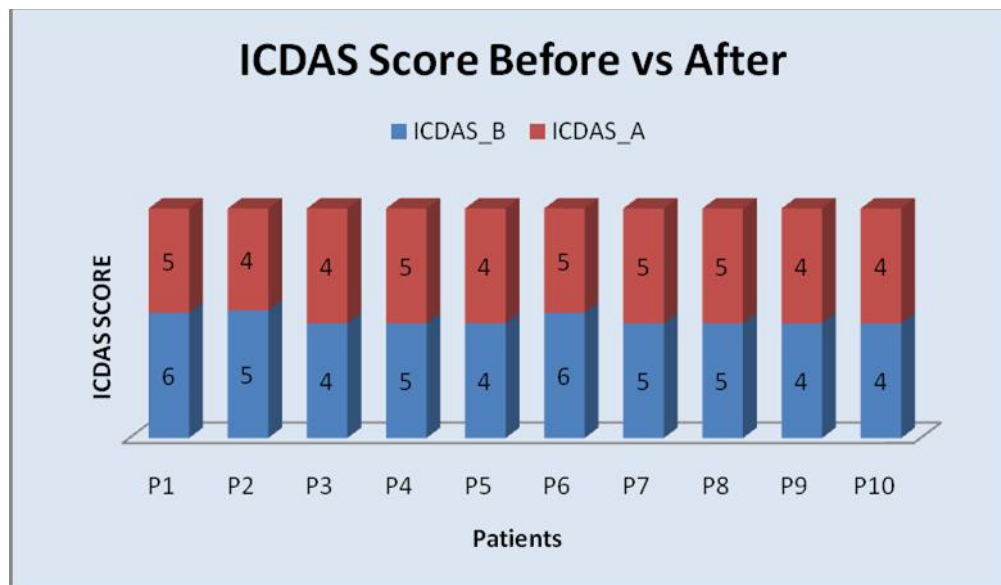
Dental caries severity Index	Score
Sound tooth surface	0
First visual change in enamel	1
Distinct visual change in enamel	2
Localized enamel breakdown due to carries no visible dentin	3
Underlying dark shadow in dentin	4
Distinct cavity with visible dentin	5
Extensive distinct cavity with visible dentin	6

*1=No Symptoms, 2=Mild, 3=moderate, 4=Severe, 5=Extreme, 6=very extreme.

Results

10 patients who came to the outpatient department of Government Siddha Medical College, AAGHIM who presented with the pain ,swelling, inflammation and decay tooth. Out of them, 10 patients were selected. These ten patients were enrolled based on the eligibility criteria. They were administered kandankathiri vithai pugai. Their symptoms before and after were recorded. The results were shown in

	ICDAS_B	ICDAS_A
P1	6	5
P2	5	4
P3	4	4
P4	5	5
P5	4	4
P6	6	5
P7	5	5
P8	5	5
P9	4	4
P10	4	4



Discussion

The prevalence of dental decay, decayed missing filled teeth (dmft/DMFT), and oral health.

The adults with a mean age between 30 and 45 years had maximum caries prevalence of 98% DENTAL CARRIES has a one-year prevalence of 6–15% ,dental decay is a significant health problem affecting 5–12% of the general population.

In this study patients came with a complex of symptoms, majority of the people came with the

symptoms of pain and inflammation. And the result were shown in the percentage for all treated ten patients by Before and After Treatment.

Conclusion

Significant improvement in various clinical manifestations of dental carries were noted in small group of patients administered with KVP. Hence these findings can be further taken up for study in large group of population for complete contemporary understanding of the role of KVP in the management of dental carries (pal sothai).

References

- 1) Siddha Materia Medica K.S. Muregasenmudhaliyar.
- 2) Costa SM, Vasconcelos M, Haddad JP, Abreu MH. The severity of dental caries in adults aged 35 to 44 years residing in the metropolitan area of a large city in Brazil: a cross-sectional study. BMC Oral Health. 2012 Dec; 12(1):1-1.
- 3) Sigicha ratana deepam
- 4) T.V. SAAMBASIVAPILLAI VOL 5
- 5) Thean H, Wong ML and Koh H. The dental awareness of nursing home staff in Singapore - a pilot study. Gerodontology. 2007; 24: 58-63.
- 6) Petersen PE, Bourgeois D, Ogwa H, Estupinan-Day S, and Ndiaye C. The global burden of disease and risks to oral health. Bull world health organ. 2005; 83: 661-669.

Access this Article in Online	
	Website: www.ijcrims.com
	Subject: Siddha Medicine
Quick Response Code	

How to cite this article:

M. Mohana, T. Lakshmi Priya and. M. Kannan. (2024). Clinical exploratory evaluation of Kandankathiri Vithai Pugai (Fumigation) in the management of Pal Sothai (Dental carries) - A case series. Int. J. Curr. Res. Med. Sci. 10(3): 1-5.

DOI: <http://dx.doi.org/10.22192/ijcrms.2024.10.03.001>