World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Published by Atom and Cell Publishers
Available online at: http://www.wjpsonline.org/
Original Article

Assessment of analgesic property of Karpur oil matrabasti in the patients of acute fissure in ANO by using visual analogue scale (VAS)

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Received: 07-01-2017 / Revised: 10-02-2017 / Accepted: 20-02-2017 / Published: 28-02-2017

ABSTRACT

Karpur has been used by ancient period for promotion of pain healing. A vast drug review shows that this drug also posses analgesic activity. The analgesic effect of this plant when used in anal fissure may be of great value in relief of pain which is a constant feature in these cases. As it compared well with lox gelly in its analgesic response, the nature of its chemically active constituents needs to be explored. The pain VAS is a unidimensional measure of pain intensity which has been widely used in diverse adult populations. Our main purpose was to evaluate the analgesic property of this drug in patients of anal fissure and secondary objective was to prepare a scientific, valid document over analgesic property of present drug in terms of visual analogue score. It is seen that drug karpur oil has significant impact over pain in terms of VAS so it can be used as analgesic agent in various anal painful conditions.

Keywords: fissure, karpur oil, Ayurvedic oil, Parikartika, VAS

INTRODUCTION

Acute Fisssure in ano it's a painful and irritating condition among the anorectal deseases. Surgical Management of fissure is again very agonising due to its recurrence so to treat fissure there is need of some medicinal formulation which should be easier to apply and cost effective also.so we made an effort to evaluvate the effect of karpur oil in the mamagement of fissure in ano. Primary objective was to evaluate the analgesic property of this drug in patients of anal fissure and secondary objective was to prepare an scientific, valid document over analgesic property of present drug in terms of visual analogue score. The word camphor derives from the French word *camphre*, from Arabic *kafur*, ultimately from Sanskrit, कर्पूरम् / *karpūram*.[1] Camphor was well known in ancient India during the Vedic period. In Old Malay it is known as *kapur Barus*, which means "the chalk of Barus". Barus was the name of an ancient port located near modern Sibolga city on the western coast of Sumatra island.[2] This port traded in camphor extracted from laurel trees (*Cinnamonum camphora*) that were abundant in the region. Even now, the local tribespeople and Indonesians in general refer to aromatic naphthalene balls and moth balls as *kapur Barus*. Camphor is readily absorbed through the skin, producing either a coolness or warmth sensation,[3] and acts as slight local anesthetic and antimicrobial substance.

MATERIAL & METHODS

Drug (*karpuram)* .
Latin name : *Cinnamonum camphora*

Family :Lauraceae
Hindi and Bengali Name-Karpur
English name – Camphor tree
Kanada name- Pache karpoora
Telgu name – Karpuram chettu
Tamil name- Karpooram,pachai karpooram
Marathi & Gujrathi - Karpuram
Sanskrit- Chandraparade, Sheetabhra, Sheetalaraja Hima, Himavaluka,

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Camphor is an active ingredient (along with menthol) in vapor-steam products, such as Vicks VapoRub. It is used as a cough suppressant and as a decongestant.[4] Camphor may also be administered orally in small quantities (50 mg) for minor heart symptoms and fatigue Through much of the 1900s this was sold under the trade name Musterole; production ceased in the 1990s.Camphor was used in ancient Sumatra to treat sprains, swellings, and inflamation. Camphor is a component of paregoric, an opium/camphor tincture from the 18th century. Also in the 18th century, camphor was used by Auen brugger in the treatment of mania.[5] It has long been used as a medical substance in ancient India, where it generally goes by the name Karpūra. It has been described in the 7th-century Āyurvedic work Mādhavacikitsā as being an effective drug used for the treatment of fever. The plant has also been named Hima and has been identified with the plant Cinnamomum camphora. According to the Vaidyaka-śabda-sindhu, it is one of the "five flavours" used in betel-chewing, where it is also referred to as Candrabhasma ('moon powder').

In Small dose Its effects on the body include tachycardia (increased heart rate), vasodilation in skin (flushing), slower breathing, reduced appetite, increased secretions and excretions such as perspiration and urination. [6] The sensation of heat or cold that camphor produces is caused by activating the ion channel TRPV3. Large dose toxicity shows Camphor is poisonous in large doses. It produces symptoms of irritability, disorientation, lethargy, muscle spasms, vomiting, abdominal cramps, convulsions, and seizures. Lethal doses in adults are in the range 50–500 mg/kg (orally). Generally, two grams cause serious toxicity and four grams are potentially lethal.[7]

Acute Anal Fissure (Parikartika): General features of acute anal fissure includes Painful defecation, burning or pricking anal pain, strick of blood on passed stool it is also mentioned in ancient texts as virechana vyapada. Forceful anal dialation, chronic constipation, hard stools, prolong journey can be evoke this condition in this condition patient may complain intolerable pre and post defication pain they seeks very urgent treatment to relieve pain.

METHODOLOGY:

Study Type : Interventional
Purpose : Treatment
Control : controlled
Timing : Prospective
No. of Groups: Two
Sample Size : 40 in each group

Patients of acute fissure were the subjects
Assessment criteria was pain in terms of VAS

Purpose of study was evaluation of Ayurvedic drug for pain relief in anal fissure patients to minimise the load of analgesic drug and its adverse effect.

Drugs

For Group A (Treated group)	**For Group B (controlled Group)**
1.Drug – Karpur oil	1.Drug-lox 2% gelly
2. Dose – 20 ml BD	2.Dose – 500mg BD
3. Route of administration – local	3.Route of administration – orally,
4. Sitz bath	4. Sitz bath
5. Duration- 02 days.	5. Duration- 02days.

VAS scale:

The pain VAS is a continuous scale comprised of a horizontal (HVAS) or vertical (VVAS) line, usually 10 centimetres (100 mm) in length, anchored by 2 verbal descriptors, one for each symptom extreme Instructions, the scale is most commonly anchored by "no pain" (score of 0) and "pain as bad as it could be" or "worst imaginable pain" (score of 100 [100-mm scale]).

Oil application Procedure: Karpur oil was prepared as per standard procedure 20 ml lukewarm oil was used for matrabasti purpose twice daily at morning and evening. Matrabasti will be given in left lateral position. Observations were assessed at before treatment and during at 7^{th}, 14^{th} and 24^{th} hour after each basti.

OBSERVATION & DISCUSSION

Present trial design was based on conventional methodology used for single blind clinical controlled trial. Patients of anal fissure were the subjects for this study. Total 96 patients were screened for study from surgery OPD of A &U Tibia Hospital karol bagh New Delhi. Out of them 12 patients are excluded with proper referral as they did not fit in inclusion criteria, whereas 04 patients are withdrawn from study due to protocol

voidance with irregular follow-up. They were advised for alternative treatment. 80 patients were enrolled and taken-in for the trial assessment in the study. They were divided into two groups with simple random allocation method, Group A (Treated Group)- 1. Drug – Karpur oil matra basti 2. Dose – 20 ml BD 3. Route of administration – Per rectum 4. sitz bath 5. Duration- 02 days. Group B- (Control group) treated with Lox 2 % (Lignocaine) gelly 500mg. Observations were made during and after the treatment, to find out the analgesic property of drug *karpur oil* in terms VAS (visual analogue scale)

VAS Scoare was assessed on every follow-up,effect on clinical parameter pain in terms of VAS at different time points reveals that Mean±SD of VAS in Group A (Treated Group) was 10, 5.05± 0.31, 2.76 ±0.97 & 0.12± 0.33. at baseline, 7^{th} ,14^{th} and 24^{th} hour respectively. In Group B (Control Group) it was 10, 5.57 ±1.41, 3.57± 0.59 & 0.72 ±0.45 at baseline, 7^{th}, 14^{th} and 24^{th} hour respectively.

On Comparison of change in VAS at 7^{th}, 14^{th} and 24^{th} hour respectively. from baseline between 2 groups by wilcoxon Rank sum test reveals that at hr 7^{th} mean change of VAS in Group A was 4.95± 0.31 and 4.42± 1.41 in group B this difference has not statistically significance. (P= 0.5110, NS). On hr 24^{th} mean change of VAS in Group A was 7.32± 0.97 and in group B it was 6.42± 0.59 it reveals that there is significant reduction in pain as per VAS in group A on compared with Group B (P <0.0001, HS i.e. highly significant) . On 14^{th}, 24^{th} hr mean change of VAS in Group A was 9.87± 0.33 and in group B it was 9.27± 0.45 .indicates that there is significant reduction in pain as per VAS in group A on compared with Group B (p=<0.0001, HS i.e. highly significant).This shows Relief from pain is seen relatively earlier in Group A (Treated group) than in group B (Control group).This may be due to drug *karpur* has potent analgesic property on local application in the management of acute fissure in ano.

Conclusions:

1. In spite of lack of use of herbal remedies for pain in fracture patients lot of references regarding drugs which may act on pain were available in Ayurvedic texts.
2. *Karpur oil* is a pharmacological agent for pain relief acute anal fissure.
3. Drug *Karpur oil* has analgesic property so it can reduce the load of analgesic drugs used in acute anal fissure management.

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