



Formulation and Evaluation of 5 Days Herbal Feminine Roll on to Reduce Dysmenorrhea

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ABSTRACT

Menstruation or period, is normal vaginal bleeding that happens as part of a woman's monthly cycle. Many women have painful periods, also called dysmenorrhea. The pain is most often menstrual cramps, which are a throbbing, cramping pain in your lower abdomen. You may also have other symptoms, such as lower back pain, nausea, diarrhoea, and headaches. Period pain is not the same as premenstrual syndrome (PMS). PMS causes many different symptoms, including weight gain, bloating, irritability, and fatigue. PMS often starts one to two weeks before your period starts.

In this research we have formulated herbal product i.e Herbal Roll On. Herbal Roll is especially made to get relief from menstrual cramps that can be either pre-menstruation cramps, during menstruation and post menstruation. The study includes the evaluation of efficacy and safety parameters in the management of menstruation cramps. Our study includes total about 35 patients. The patients are advised to apply the Roll On over the lower abdomen. After scoring the feedback there was highly reduction in the mean score of the cramps. This formulation can be beneficial to the feminine during there 7 days and all over the period cycle. Whenever particular cramps occurred and it is used very friendly as we have dispensed it in the single pocket size container.

The effect of 5 days Herbal Feminine roll on have poly herbal composition and it's ingredient oils are mentha, thymol, clove, camphor and asafoetida oil.

KEY WORDS: Roll on, Menstruation, Dysmenorrhoea, cramps, Menstrual cycle.

INTRODUCTION

Dysmenorrhea also called menstrual cramps is the pain cause by the womb muscle contraction during the periods. Dysmenorrhea is also occur during pre- menstruation and post menstruation. In this research you prepare the herbal roll on to reduce the pain of menstrual cramps. The Roll on composition ingredients are Clove, thymol, Mentha, Camphor and asafoetida. The case study of Roll On includes the 35 patients. The patients are advised to apply the Roll On over the lower abdomen. Dysmenorrhea can be classified as primary and secondary dysmenorrhea. Primary dysmenorrhea is a lower abdominal pain happening during the menstrual cycle which is not associated with other diseases or pathology.

During the menstrual cycle, the lining of the uterus produces a hormone called prostaglandin. This hormone causes the uterus to contract, often with pain. If you have severe cramps, you may be producing higher-than-normal amounts of prostaglandin. Or you may be more sensitive to its effects.

Medications such as aspirin, ibuprofen and naproxen reduce prostaglandin production and thus reduce menstrual cramps. The combination of hormonal birth control with anti-prostaglandin medication can be very effective in both preventing and treating menstrual cramps.

Inspite of all these medications we prepare a herbal roll on oil for prevention of menstrual cramps which we named **5 Day Feminine Herbal Roll on**.

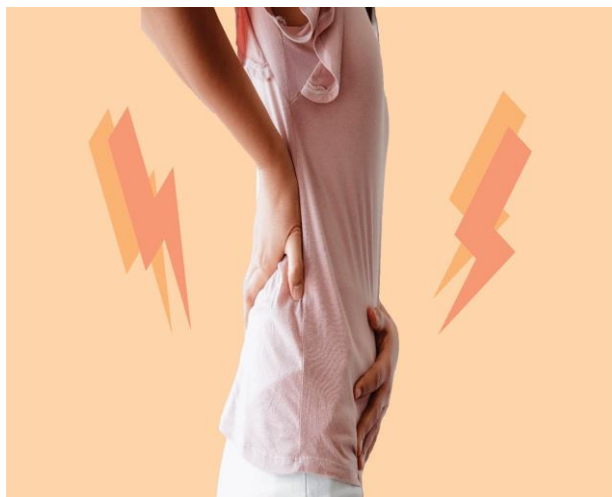


Fig.1.1: occurrence of dysmenorrhea

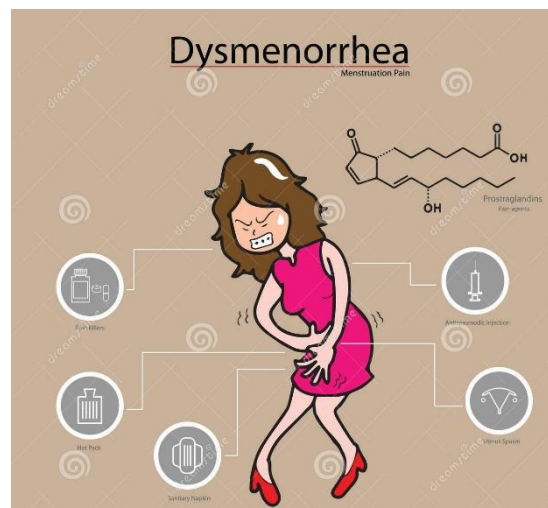


Fig.1.2: dysmenorrhea

AIM & OBJECTIVE

AIM:

To prepare Polyherbal roll-on by using selected herbs to diminished the side effect of Alcohol based roll-on to reduce **Dysmenorrhoea**.

OBJECTIVE:

The main aim for the preparation of a polyherbal roll-on is for “reduction of dysmenorrhoea”. It plays a vital role in the control and reduction of any sort of pain during the menstrual cycle. The main motto of this polyherbal roll-on is to reduce the frequency of the menstrual cramps which occurs during the menstruation period on every month. Because of the dysmenorrhoea, females get an bad impact on their schedule of that time. Therefore we introduced “5 days herbal feminine roll-on” so every women can free comfortable in their schedule.

LITERATURE SURVEY

Formulation of herbal ROLL-ON from Indian herbs:

Ali B. Essential oils used in aromatherapy: A systemic review. Singapore: Hainan Medical University; 2015.

In these review he State the use of herbal ingredients in the preparation of oil. He also mentioned the benefits of the herbal oil in the treatment of various diseases such arthritis and others.

In the large proportion of women who get little to no relief from OTC analgesics, our meta-analysis suggests that heat, acupressure or exercise may provide an effective adjunct, or in the case of exercise and heat an effective alternative to, analgesic medication for the management of pain in primary dysmenorrhea. Current research does not address the significant non-specific effects associated with exercise or acupressure interventions. There is a need for future rigorous research designs. Future research on a package of care including some, or all, of these self-care interventions would provide a better understanding of the potential effectiveness and resource requirements of these interventions in a community setting

Medicinal plants, drugs, and acupressure seem to suppress pain by reducing the level of prostaglandins, mediating nitric oxide, increasing beta-endorphin levels, blocking the calcium channel, and enhancing circulatory flow through the uterine pathway. Further trials with larger populations, longer durations, featuring comparisons with safe drugs and accurate descriptions of the involved molecular mechanisms are required to confirm the benefits of the procedures described and ensure the absence of complications. The conclusions presented herein are also affected by the fact that some of the methods were analyzed by only a handful of studies.

MATERIALS & METHOD

Collection of herbs for roll on to reduce dysmenorrheal:

Collection of seeds, leaves and flower of different herbs were done from different surroundings in accordance to extract oils from different collected herb for the formulation of herbal roll on to reduce dysmenorrhea. These herbs were collected from the areas like from the laboratories of our college and from our native places. The extraction procedure of oils was done in our lab area only.

The plants were selected on the basis of their potency of anti-microbial activity, anti-inflammatory activity, pain-reliever, anti-viral and etc. The herbs which we preferred for our herbal roll-on were – Camphor, mentha(mint), clove, thyme(ajwain) and asafetida(hing).

These herbs were collected and weighed properly. After weighing the solid form was converted into powdered form and then it was placed for extraction procedure in order to extract respective oil from its crude form and then the extracted oils were used for the formulation of 5 days of herbal feminine roll-on to reduce dysmenorrhea.

CLOVE:

Cloves (*Eugenia caryophyllus*) are the aromatic dried flower buds of a tree in the family Myrtaceae. The medicinal properties of clove have been known over the centuries. It is beneficial as a home remedy in curing various health ailments. Cloves have long been considered a home remedy in India for toothaches, joint pains, indigestion, asthma, cough, skin disorders, headache, etc. These health benefits of clove can be attributed to its antimicrobial, antiseptic, antispasmodic, carminative, expectorant, germicidal, rubefacient, stomachic and stimulant properties.



Fig.5.1: clove powder from clove



Fig.5.2: Clove oil from clove

EXTRACTION OF CLOVE OIL USING CLEVINGER APPARATUS:

Procedure: 60gm of clove in round bottom flask attached to the Clevenger apparatus with sufficient amount of water which boiled at 80° to 90°C. The water vapour along with the active constituent was condensed by the condenser and collected in graduated collecting tube of the apparatus. Then isolate the eugenol with separating funnel. The volatile distillate was saturated with sodium chloride and added with some ether. Then, the ether layer and hydro layer were divided by the funnel. After dehydrated by anhydrous sodium sulphate, the ether layer was extra heated in the 60°C water bath to make all to be concentrated and the ether to be recovered. The clove oil was weighed 1.6 ml and this procedure was performed twice. [5]



Fig.5.3: Extraction of clove oil from clove using Clevenger apparatus



Fig. 5.4: collection of oil in collecting chamber

By this extraction procedure we extracted the clove oil from the clove. Afterwards when the heat is discontinued, the mixture of oil collected in the collecting chamber of the Clevenger apparatus is taken out slowly in the beaker.

Then the mixture of oil is poured into the separating funnel with different solvents to separate out the crude form of oil.

In the separating funnel different layers were form according to the different parameters like: viscosity, surface tension, density, solubility, vapour pressure and etc.

The layers seen in the separating funnel:



Fig.5.5: oil in separating funnel

MENTHA:

Mentha arvensis (also known as mint) is a genus of plants in the family Lamiaceae (mint family).The most predominant along them are depression, anxiety, nervous tension, lack of self-esteem, asthma, rheumatism, bronchial congestion, lack of appetite, fever, rheumatic conditions, halitosis, dandruff, acne, flatulence and bad breath.



Fig. 5.6: mentha herb and oil(menthol)

EXTRACTION PROCESS FOR MENTHOL:

The HD method consists of placing 330g of grounded mint leaves inside a 500ml flask of Clevenger type apparatus with 250mL of distilled water for hydro-distillation and carried out at least in duplicate during a 6-h extraction process. The water vapour along with the active constituent was condensed by the condenser and collected in graduated collecting tube of the apparatus. Separation of active constituent by adding 50ml dichloromethane in separating funnel. The remaining water removes by adding anhydrous calcium chloride and filter it. After heating 1.6 ml menthol is obtained.

AJWAIN:

Trachyspermum ammi (L.) Sprague or commonly Ajwain is a herbaceous herb belonging to the family Apiaceae. Ajwain seeds revealed to possess antiseptic, stimulant, carminative, diuretic, anesthetic, antimicrobial, antiviral, nematicidal, antiulcer, antihypertensive, antitussive, bronchodilatory, antiplatelet and hepatoprotective as well as antihyperlipidemic effects, many of those were remarked by early Persian physicians.



Fig.5.7: Ajwain herb and thymol (ajwain oil)

EXTRACTION PROCESS FOR THYMOL:

Take about 250 ml of water in the steam generator and start heating to produce steam. In the round bottom flask take about 75 gm of crushed carom seeds. A vigorous current of steam from steam generator is passed through the round bottom flask. A part of the steam condenses in the round bottom flask. As more and more steam is passed, the steam volatile components pass through the condenser along with steam. These contents on condensation are collected in the receiver. The contents in the round bottom flask may be heated by a Bunsen burner to prevent excessive condensation of steam. The process of steam distillation is continued for about half an hour. Transfer the distillate to a separating funnel and extract with 20 ml portions of petroleum ether 3 times. Combine the petroleum ether extracts in a 250 ml conical flask and dry it with the help of anhydrous sodium sulphate. Remove the solvent from the dried filtrate by careful distillation in a water bath. The essential oil is left behind in the distillation flask. The weight of extracted essential oil was 1.2 ml. and this procedure was performed twice.

CAMPHOR:

Camphor oil is extracted from the wood of camphor trees, known scientifically as *Cinnamomum camphora*, and it has a strong aroma. It can also be synthesized from turpentine. Camphor oil is popular in aromatherapy, as it helps relieve respiratory congestion. It also has antitussive properties that can help ease coughs in children and adults. Essential oils may help treat Trusted Source headaches, including migraine headaches. Those that contribute to a calming atmosphere may also promote sleep. A 2019 study in mice investigated the effect of *Cinnamomum camphora* on migraine. It found that the essential oil could suppress pain-signalling pathways and weaken neurogenic inflammation.



Fig.5.8: Camphor and camphor oil

ASAFOETIDA (HING):

Hing or Asafoetida additionally referred to as Hingu in Hindi, Ingu in Kannada, Inguva in Telugu, and Perungayam in Tamil is an imperative culinary factor not an unusual place in each Indian kitchen. Asafoetida (*Ferula asafoetida*) is an oleo-gum resin crafted from the stems of the *Ferula* vegetarian of the Umbelliferae family. Hing plants are pale greenish yellow in color, fruits are oval, flat, reddish-brown loaded with milky juice, and roots are thick, huge, and pulpy. They bleed an extract equivalent to that of the stems.



Fig.5.9: hing and its oil

EXTRACTION PROCESS FOR ASAFOETIDA OIL: The Asafoetida oil is derived by steam distillation of the asafoetida tree gum and this oil can be used to increase the standards of many delicacies. The Asafoetida oil has a lot of different properties which provides the users with different kinds of benefits which includes relief from intestinal disorders, blood purifier and also a brilliant element to balance mental stress. Due to so many benefits and also available at an affordable rate, the Asafoetida oil is sold worldwide on various websites. Another method is dissolving asafetida in hot oil and adding it drop by drop in the required formula. Hing oil is extracted by the method of steam distillation.

FORMULATION: Add 1.02 ml of camphor oil in selected container. Then add 0.97 ml of menthol oil, 1.06 ml of clove oil and 0.95 ml of thymol oil into it. And at last 1 ml of asafoetida oil. The mixture was blended properly for about 10 to 15 minutes. The formulation was stored in seal packed container in cool and dry place.

FORMULA:



Fig.5.10: formulation of herbal oil roll-on

Table 1: Composition of ingredients

Sr.no	Ingredients	Quantity Taken (ml)
1.	Camphor oil	1.02
2.	Menthol	0.97
3.	Clove oil	1.06
4.	Thymol	0.95
5.	Asafoetida oil	1

RESULT:

This study observes significant effect on sign symptoms which showed 80% efficacy on Dysmenorrhoea. There was significant relief from menstrual cramps for long duration which might be due to aromatic medicated oil. Therefore it may be concluded that 5 days Herbal Feminine Roll-on can be effective and safe in management of dysmenorrhoea. This 5 days Herbal Feminine Roll on is used by more than 30 patients. The reviews from the patient are on positive.

SUMMARY

5 days of natural pain relief for women Roll On is a cutting-edge, herbal roll on that offers long-lasting relief from period cramps. The cramp relief quickly absorbs into the skin and doesn't leave any residue or oil on the body or on your clothes.

Even though a woman's period is a natural part of her life, severe period pain does not have to be. Menstrual pain is typically treatable, so women don't have to just put up with it. It may be a good idea to consult a doctor if you get particularly painful periods or if the discomfort keeps getting worse over time.

For outpatients with primary dysmenorrhea, aromatherapy massage reduced the severity of menstrual discomfort and offered alleviation. The combined essential oils have four significant analgesic ingredients, totaling up to 79.29%.

The oil mixture was to be massaged into the abdomens of the study's female participants. Women who used the essential oils for menstruation reported less discomfort and bleeding than those who received a placebo, according to this study.

The health of women's periods is directly correlated with their overall health. Most ethnic groups' traditional medicines have helped treat gynaecological illnesses and improve women's health. Practitioners in this sector have amassed a vast array of potent medications and prescriptions, as well as extensive knowledge in treatments and medication. These experiences have also been passed down and refined through contemporary clinical practise and academic study. But there is not enough basic study on these drugs, there is not enough public awareness of drug usage, there is not enough utilisation of the benefits of drugs, and there is still not enough guidance potential for contemporary drug research. As a result, it is essential to continue to advocate for and significantly improve the health of women.

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