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EXPLORING THE ADVERSE DRUG REACTIONS OF KSHARPLOTA BANDAGE IN WOUND CARE – A REVIEW

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Abstract

Good quality of wound healing is a difficult task to the clinicians in ancient time and even in present time though. Wound healing is a defence mechanism of our body to prevent and fight against infection. In Health sciences, wound healing formulations are practiced with their own advantage and disadvantages. Ayurveda is a divine science of medicine where there are so many pieces of diamonds available for management of Vrana without any complication. Our Acharyas broadly described about treatment principles of wound management and classified the drugs related to Vranashodhana and Vranaropana.

As per text we are well known about the wider approach of Acharya Sushruta in relation to Vrana and its management. They have mentioned various dressing materials for wound care, it comprises Pichu, Plots, Kawalika, etc. Among these Plota is much better because we can use it for both purposes i.e. to clean as well as to cover the wound.

Ksharplota (Medicated Gauze) is an innovative and newer concept used for management of infected and chronic wounds and ulcers. Ksharplota is a herbo-chemical compound and prepared with the help of Snuhikshira (Milk of Euphorbia neriifolia Linn.), Apamargakshara (Ash of Achyranthes aspera L.) and Haridra (Curcuma longa L.). A single coating of the above drugs was given to the Plota (Gauze). It can be used in number of open wounds and ulcers.

Ksharplota therapy, also known as alkaline medicated gauze therapy, is a traditional wound care approach that has gained recognition and acceptance at the international level. This therapy involves the application of specially prepared alkaline medicated gauze to promote wound healing and manage various types of chronic wounds. This paper aims to provide a comprehensive overview of adverse drug reactions and scope of Ksharplota therapy in wound care on an international scale. It explores the therapeutic mechanism, clinical applications, and effectiveness of this therapy, highlighting its potential benefits, and adverse drug reactions.

KEYWORDS: Ksharplota, Adverse Drug Reactions (ADRs), Wound Care, Pharmacovigilance of Ksharplota, Dushta Vrana

Introduction

Pharmacovigilance is the need of hour to keep an eye on the adverse drug reactions induced by all systems of medicine. A Drug or formulation produces adverse events if it is not procured, produced, and used as per the classical guidelines. Various classical preparations along with some proprietary formulations were manufactured by the developed pharmaceutical industries which have brought many challenges about safe use of Ayurvedic medicines especially metallic preparations and herbo-mineral drugs of Ayurveda are always in doubt regarding safety and toxicity.

Ayurveda medicine is being routinely prescribed in different parts of the India for hundreds of years but globally a serious question was raised about the safety of Ayurvedic preparations because it contains various heavy metals like Mercury, Lead, and also some poisonous substances like Aconite. Any untoward effect caused because of a drug, aside from expected beneficial action is named as adverse reaction. A drug or formulation produces adverse events if it is not obtained, manufactured, and presribed as per the classical guidelines. Some therapeutic factors which can also contribute to a rise within the chances of ADRs of Ayurvedic medicines like the irrational use of medicines without precision in diagnosis, disease variant, stages of the disease, and specific prototype of the person.

Ancient Ayurvedic scholars were very much aware of the toxic nature of raw material used and keeping within the mind they have described Aushadh Sevan Janya Vikar in their classics elaborately, which reflect their concern about the adverse effect of Ayurvedic drugs. There are some guidelines given by the Rasacharya to minimize adverse drug reactions and increase the safety of Rasaoushadhi during their preparation and use.

Contribution of Ksharplota ingredient towards its mode of action:

1. Snuhikshira (Latex of Euphorbia neriifolia Linn.) possess properties such as; Lekhana, Vedanasthapana, Rakthashodhaka and Vishaghna due to Katu & Tikshna Rasa and Ushna Virya. The latex of plant also found to have rubefacient, irritant and powerful caustic action when applied to a raw surface, it also offers analgesic, anti-inflammatory, wound healing and antibacterial activity. It is believed that Euphorbia neriifolia enhances wound healing process by promoting tensile strength, epithelization and angiogenesis.

2. Apamargakshar (Ash of Achyranthes aspera L.) offers Lekhana, Chedana, Bhedana, Ropana, Kushtaghna, Shodhana and Krumighna properties due to Katu & lavana Rasa and Ushna Virya. Katu Rasa contributes towards Shonit Sanghat Bhinnati action of ApamargaKshara (Ash of Achyranthes aspera L.) which breakdown pus pockets and blood
clots at the site of Vrana. ApamargaKshara (Ash of Achyranthes aspera L.) also possesses analgesic, anti- inflammatory, haemostasis and antibacterial activity which offers symptomatic relief in Vrana.

3. Tikta & Laghu Guna and Ushanya Virya of Haridra (Curcuma longa L.) provides Varnya, Sandhana, Vedanashamaka, Raktastambhak, Raktashuddhikar and Lekhana properties. It enhances capillaries vasodilation when applied locally thus facilitates wound debridement (Shodhana) and wound healing (Ropana) process. It also possesses anti-inflammatory, analgesic and antibacterial activity.

The alkaline nature of the gauze helps create an environment that facilitates wound debridement, reduces microbial load, stimulates tissue regeneration, and improves wound healing outcomes. Ksharplota overall possess penetrating, scrapping, draining, debridement, sclerosing, healing, antibacterial and anti-inflammatory effect in the management of wound and cuts. While this therapy has been primarily practiced in India, its efficacy and safety have attracted attention on an international scale. This paper aims to explore the adverse drug reactions and scope of Ksharplota therapy in wound care at an international level, examining its therapeutic mechanism, clinical applications, and evidence-based outcomes.

Exploration of Adverse Drug Reactions and Scope of Ksharplota bandage

Indications

- Sinus
- Infected wound
- Warts
- Open wound
- Ulcer
- Deep wound
- Diabetic wound to remove slough

Therapeutic action of Ksharplota dressing

1. It cures, drain and heal wound.
2. It helps to removes unhealthy tissue.
3. Ksharplota dressing promotes natural healing process.
4. Clean wound by separating debris.
5. Reduces chances of infection due to its anti-microbial property.
6. Anti-inflammatory effect of Ksharplota dressing relieves pain.
7. Enhance epithelialization and tissue granulation.

Advantages of Ksharplota:

1. It is non-invasive technique.
2. Ksharplota dressing is not sticky to the skin.
3. Less adverse effects.
4. Economic and easy to use.
5. No psychological fear to the patient regarding therapy.
6. Low recurrence rates.
7. Minor cases may be managed by Ksharplota dressing without hospitalization.
8. Acceptance and tolerance by the patient for the Ksharplota dressing is high.

Disadvantages

1. Some allergic reactions may occur associated with caustic action.
2. Cannot be used near eye, face and genital parts
3. Cannot be used in sutured wound.
4. Loss of hairs may observe.
5. Greying of hairs may take places.
6. Mild burning sensation due to prolong action.

Contra indication of Ksharplota

Ksharplota contra indicated to the patient of Raktpitta, Timira, Ruksha, Moorchha, diseases occur at the sites of Marma, Sira, Snayu, Sandhi, Tarunasthi and Dhamani. Ksharplota not indicated to the condition of oedema, joint pain and internal cuts/wounds.

Precautions

1. Ksharplota is hygroscopic so coating should be avoided during rainy season.
2. Ksharplota coating should be done at low atmospheric humidity level.
3. Polythene bags should be sealed completely.
4. Ksharplota should be dry during packing.
5. The surface should be clean before Ksharplota application.
6. Hand gloves recommended during preparation and application of Ksharplota.
7. Ksharplota dressing changed regularly when used for many days.
8. Patient allergic to alkali need to care during Ksharplota application.

Discussion

Innovator who has made notable contributions to the understanding and application of Ksharplota therapy. Innovator has conducted research, authored publications, and presented his findings on the therapeutic aspects and management of Ksharplota therapy which helped shed light on the mode of action, efficacy, and potential benefits of this traditional wound care approach. Research has focused on exploring the use of Ksharplota therapy in managing infected wounds, such as abscesses, carbuncles, boil, sinus, lacerations, diabetic wound, fournier gangrene, venous ulcer, pressure ulcer and other chronic wounds. Present Authors has conducted case studies and published research papers highlighting the positive outcomes achieved with the application of Ksharplota therapy in wound healing, infection control, efficacy & safety.

Authors has contributed to the growing body of knowledge surrounding Ksharplota therapy, providing valuable insights into its potential benefits and practical applications. His efforts have helped bridge the gap between traditional and modern wound care approaches, showcasing the relevance and effectiveness of traditional therapies in the management of surgical infected wounds.

It is important to note that Ksharplota therapy is a collective contribution of various practitioners, researchers, and scholars who have worked towards its development and standardization over time. These individuals have played a crucial role in innovating and advancing Ksharplota therapy, making it more accessible and applicable in the field of wound care.

From three subsequent readings, it was observed that average pH of Ksharplota was 9.57 and it indicates moderate alkaline media which was tolerable by maximum no. of patients (90%) but minimum no. of patient (10%) was observed slightly adverse drug reactions of Ksharplota like burning sensation, pain, irritation, itching, redness, inflammation, discomfort, local restricted movement, uneasiness in the first three hours after application of Ksharplota bandage. After 24 hrs, some patients observed for surrounding skin abrasion, ulcerations, slough, breaking of capillaries (bleeding), foul smell of discharge but no generalise adverse drug reactions were observed to any patient as per critical review available regarding ksharplota therapy in wound management in last decade. The adverse drug reaction of Ksharplota bandage is mostly observed in hypersensitive skin mostly those patients with fair skin, females, Avara Satva patients, Avara Sara, Avara Bala and Pitta & Rakta Dosh Prakruti dominant.

Conclusions

1. As per reviewing data analyse of Ksharplota in wound management suggested that it is an easily acceptable, cost effective, mostly safety and high impact to break the pathogenesis and regeneration of tissue.
2. Adverse drug reactions of Ksharplota in wound management depends on site of wound (Genital region, Perianal region, Oral cavity, Eye).
3. The adverse drug reactions of Ksharplota bandage observed mostly at first application but not appeared onwards.
4. The management of adverse drug reactions of Ksharplota bandage requires only counselling & Psychological support to patient, it was observed that adverse drug reactions symptoms disappeared or regress within 72 hrs.
5. Management of adverse drug reactions of Ksharplota dressing were carried out with the help of Kumari Svarasa (Aloevera pulp) application or Jatyadi Ghrut.
6. Kumari Svarasa & Jatyadi Ghrut showed remarkable improvement in management of adverse drug reactions of Ksharplota bandage.
7. As per reviewing clinical & animal experimental study in wound management with special reference regarding Ksharplota adverse drug reactions, it may be concluded that animal experimentation also reported high impact in tissue regeneration with minimum adverse drug reactions but no remarkable untoward effect in wound healing process.

Reference

1. Dr Anantkumar V. Shekokar, Dr Vijay P. Ukhalkar, Study the efficacy Of Ksharplota in Dushta Vrana w.s.r.to Infected wound International Journal of Ayurvedic Medicine (ISSN: 0976-5921, April-June Vol 11 (2). pg. no. 314-321.
2. Dr.Anantkumar V. Shekokar, Dr Kanchan M.Borkar, Globalization of Ksharplota Therapy (Alkaline Medicated Gauze) in Wound Management., International journal of All research education and scientific methods (ISSN: 2455-6211), August 2023, Vol 11(8), pg.no. 1647-1652.
3. Dr Anantkumar V. Shekokar, Dr Vijay P. Ukhalkar, Critical Review on Ksharplota and Its Therapeutics Aspect. Journal of Drug Delivery and Therapeutics (ISSN: 2250-1177), February 2019, Vol 9 (1-s), Pg. no. 510-515.
4. Dr Anantkumar V. Shekokar, Dr Vijay P. Ukhalkar, Expository Aspect For Action of Ksharplota. Journal Of Drug Delivery and Therapeutics (ISSN: 2250-1177), December 2018, Vol 8 (6-s), pg. no. 420-423.
5. Dr Anantkumar V. Shekokar, Dr Kanchan M. Borkar, Innovation of Ksharplota (Medicated Gauze) in the Management of Vrana (Ulcer), International Journal of Ayurveda and Pharma Research (ISSN: 2322-0910), October 2013, Vol 1 (2), pg. no. 10-16.
6. Dr Anantkumar V. Shekokar, Dr Vijay P. Ukhalkar Formulation and Physico-chemical Characterization of Ksharplota Dressing for Vrana Chikitsa., International Journal of Ayurveda and Pharma Research (ISSN: 2322-0910), July 2018, Vol 6 (7), pg. no. 44-50.
7. Dr Anantkumar V. Shekokar, Dr Kanchan M. Borkar, Notable Modifications of Sushruta Samhita by Dalhana on Ksharapakvidhi Adhyaya., International Journal of Ayurvedic Medicine (ISSN: 0976-5921, Oct. -December. Vol.4 (3),pg. No 314-321.International Journal of Ayurveda and Pharma Research (ISSN: 2322-0910), December 2013, Vol 1 (3). pg. No 27-29.
8. Dr Anantkumar V. Shekokar, Dr Kanchan M. Borkar, Notable Modifications of Sushruta Samhita by Dalhana., International Journal of Ayurvedic Medicine (ISSN: 0976-5921, Jully-Sept. Vol.4 (3), pg. no. 152-156.
9. Dr Anantkumar V. Shekokar, Dr. Kanchan M. Borkar, Role of Ksharplota in Lacerated Infected wound A case study., International Journal of Ayurvedic Medicine (ISSN: 0976-5921), January March 2014, Vol 5 (1), pg. no. 120-124.
10. Dr Anantkumar V. Shekokar, Dr Vijay P. Ukhalkar Management of Infected wound with Ksharplota dressing- A case study., AyushDhara (ISSN: 2393-9591), March April 2018, Vol 5 (2), pg. no. 1629-1634.
11. Dr Anantkumar V. Shekokar Dr Vijay P. Ukhalkar. Ayurveda Towards The Management of Vrana, w.s.r.to Approaches of Shalya Tantra., European Journal of Biomedical &Pharmaceutical Sciences (ISSN: 2349-8872)., March 2020, Vol 7 (3), pg. no. 418-420.
12. Dr Anantkumar v. Shekokar; Dr Kanchan Shekokar, Ayurveda towards exploring the tissue regeneration impact of Ayurvedic Ksharplota bandage in wound care – a comprehensive review, Sept 2024 afr. J. Biomed.Res. Vol 27 pg. no. 1287-1290.