Title: A PROCESS OF MANUFACTURING A HEMOSTATIC AGENT FROM TYPHA ELEPHANTINA FOR ARRESTING BLEEDING AND HEALING OPEN CUTS AND WOUNDS

ILLUSTRATION OF THE PRODUCT

SATISH SHANTARAM MOHILE

Abstract: A process of manufacturing a haemostatic agent for stopping of bleeding and healing of wounds which comprises of the following steps: Selecting stems of a plant typha elephantine; separating cotton like substance from the stem Typha elephantine; the substance is further Autoclaved to remove mites (if any) and avoid fungal growth; This dried substance is further subjected to the Pinning process for Further purification of the product; This dried product is further subjected to Grinding; This material is then passed through finely meshed sieve the finely meshed sieve and proper uniform compound; The grounded and sieved compound is subjected to sterilization (Gamma rays radiation); After sterilization the resultant product is obtained.
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
A PROCESS OF MANUFACTURING A HAEMOSTATIC AGENT FROM TYPHA ELEPHANTINA FOR ARRESTING BLEEDING AND HEALING OPEN CUTS AND WOUNDS

MERITS of the INVENTION:--

It is an objective of this invention to offer to the mankind an agent for a major problem of arresting bleeding in cases of accidents and injuries.

We find that the First Aid box contains many emergency medicines for various problems but there is no product in the box to stop Bleeding in case of emergency like an accident, when someone is badly injured there is no way you can arrest bleeding but to tie a bandage and rush with this wound to the nearest health center may it be a hospital, a nursing home or a Primary health center or even a general practitioner for getting this wound stitched.

Even in a leading ayurvedic hospital in Mumbai in India, we find that Neem Seed oil is used for meeting causalities like major accidents and this is even used for dressing of all wounds including surgical wound and dressings.
In many Allopathic hospitals we see that liquid Tincture Benzoic is used to stop blood oozing out because this is a product which has some properties of coagulation, but the burning sensation is so severe that it is intolerable and moreover it can not substitute stitches or can prolong the stitching process as per the convenience of the doctor and the patient.

This invention provides immediate solution to acute problems of accidental injuries by stopping the blood oozing out from the wounds.

This invention also provides quick relief for domestic cuts and injuries, an injury to a child who falls down while playing forces the mother to rush to a doctor for getting stitches, with this product the mother can apply this and go to the doctor at the convenience of the doctor and the patient as the blood flow has been arrested by the product. This product can manage even housewives getting domestic cuts while cutting vegetables or fruits etc. For the defense service personnel who gets injured in the field of war his life can be saved by this wonder drug.

This product has shown to exhibit haemostatic, coagulant and antiseptic properties.
Post dental surgery and tooth extraction there is a heavy bleeding and it is a major problem for the doctor to manage this. Many a times the doctor advises to hold a cotton gauze in the cavity of extraction this cotton is to be changed once it is completely soaked with blood, this pain and agony is intolerable.

This invention will help as a boon to the dental faculty throughout the world. A round ball of this agent arrests bleeding of the post extraction of the tooth or dental surgery this agent is non toxic and non poisonous (the cattle eat the raw material which is in the grass form) Even in cases of bleeding of gums this has shown to give dramatic results.

Thus there is a need in the market for this product.

This aforesaid product not only Seals but also Heals the wound., this can be a life saving drug in many emergencies. This will be the First, First Aid in the First Aid box anywhere in the world.

This will be a household Emergency first aid in every home.

This invention will give a product which will be of immense help in Hospitals, Nursing homes, In casualty Wards, Schools, colleges, Offices, Factories, All Vehicles, In Defense Services, Universally anywhere.
There is no such medicinal preparation in the market which is so multifaceted, extremely useful, user friendly, life saving and last but not the least very soothing on application as this invention.

**THE PRODUCT AND ITS USE IN THERAPY**

There is a grass which grows in marshy land where there is plenty of water, this grass is **TYpha ELITHANTINA** from the **FAMILY TYpha ANGUSTIFOLIA LINN**

Called as Typha Elephantina, Elephant grass or Cat-tails in English Eraka in Sanskrit

This swollen golden brown stem which is cylindrical in shape and dry is plucked and the compound which is silky, soft, fluffy and like cotton is separated from the stem and the rib of the stem is discarded.

The finished product has shown to exhibit Haemostatic, Coagulant and antiseptic properties.
BACKGROUND AND PRIOR ART:-

The stem of the indigenous plant Typha Eliphantina belonging to the family Typha Angustifolia Linn has been extensively known to possess haemostatic properties an agent for arresting bleeding and healing of wounds, there is no such medicinal preparation in the market which is so multifaceted, fast healing, life saving, very soothing on topical application having haemostatic, coagulant and antiseptic properties.

DRAWBACKS OF THE PRIOR ARTS:-

Wound is said to be a surface phenomenon with incision or excision type requires topical application for arresting blood flow and healing. It may be treated even with Indian traditional methods eg. Mixing of Turmeric (Curcuma Longa) with milk, Neem seed oil is used for treating major causalities like major accidental injuries even for dressing of surgical wounds Neem seed oil is used. In allopathic Tincture Iodine is used to arrest bleeding because it has some coagulant properties but the burning sensation is so severe that it can not be tolerated and moreover it cannot substitute the process of stitches and can not arrest bleeding in major cuts and wounds where as the said product arrests bleeding completely and avoids taking
stitches. In case of accident and severe injury if the wound is deep there is no way one can arrest bleeding but to tie a bandage and rush to the nearest health center for stitching. Most of the medicines available in the market are in the form of Ointment or cream, however these medicines have a greasy base in nature and lack bio-compatibility and bio adhesiveness and as such these preparations may take longer healing time for healing of incision and excision wounds.

**FIELD OF THE INVENTION:-**

This invention relates to a medical field and more specific to the arresting of bleeding from open cuts and wounds and healing of the wounds. The invention Particularly relates to a haemostatic composition which is a coagulant and an antiseptic.

The composition is prepared from a plant Eraka ,known by its botanical name as Typha Eliphantina from the family Typha Eliphantina Linn..It more particularly relates to the extraction of a bio-active composition from the said plant which not only seals the wound but also heals the wound on application preparations may take longer healing time for healing of incision and excision wounds.
OBJECTIVE OF THE INVENTION:-

The main objective of the present invention is to provide a haemostatic agent to arrest bleeding in case of emergency and to provide the First aid for arresting the bleeding which can be life threatening at times if the blood is not arrested in time. It is also an Endeavor of the inventor to provide a better and fast healing formulation obtained from the plant Typha Eliphantina.

Another objective of the invention is to provide a non greasy, non-sticky, water-washable formulations in the form of Powder, Band Aid type of strips, sachets, Pouches, powder with mint in ball form for the use of a Dentists and E.N.T. surgeons etc.

As the formulation is dry there is no possibility of fungal growth on the wound

SUMMARY OF THE INVENTION

Accordingly the present invention relates to haemostatic composition used for arresting blood flow and healing and said formulation is obtained from the plant Typha Eliphantina.

And it comprises of the following steps:-

(a) Selecting dry swollen brown stem which is cylindrical in shape;

(b) separating silky, soft Cotton like part from the stem;
(c) This substance is further *autoclaved* (passed through hot air
under pressure) to remove mites (if any) and to avoid fungal
growth;

(d) This dried substance is further subjected to the *Pinning* process
to separate out completely and to further purify the product;

(e) This dried product is further subjected to *Grinding*;

(f) This material now goes to the finely *meshed* sieve;

(g) This grounded and sieved product is further subjected to
sterilization giving the final product.

**DETAILED DESCRIPTION OF THE INVENTION**

**STEPS OF THE PROCESS**

- Dry Typha Elphantina Stems are *plucked* from the grass. An
  average stem weighs about 25 –30 gms.

- Cotton like substance is *separated* from the stem and the rib of
  the stem is then discarded.

- This compound is further *autoclaved* for 45 minutes to separate
  out mites if any, to dry the compound completely, to avoid
  fungus formation and for better efficacy.
This dried compound is further subjected to the Pinning process, to separate out completely like it is done to cotton to sep and to separate out and further purify the product.

This dried compound is then sent to the Grinding Machine where fine grinding of the compound is done.

This material now goes to the finely meshed sieve where it is filtered through sieve to give it a uniform mixing and proper uniform powdered compound. the size of the sieve is 80.

This grounded and sieved compound is further subjected to Gamma rays radiation for complete sterilization.

After sterilization the powder is ready to use, a stem of 25-30 gms. gives about 17-21 gms. finished compound.

This finished compound is directed straight from sterilization to the aseptic packing room where this is packed in sterilized packing.

ALL THE ABOVE STEPS ARE COMPULSORY AS PER THE ORDER AND THERE ARE NO OPTIONAL OR PREFERRED STEPS
FORMULATIONS SUGGESTED

- Powder in jars. (3 Sizes)
- Single use Swabs for dental application.
- Band-Aid type Strips.
- Tulle for postoperative use.
- Bandages with powder within for small cuts and Wounds.
- Single use small pouches to be kept in first Aid box.
- Different Shapes of Band-Aid strips for specific use.

OTHER PARAMETERS

The raw material should always be dry and not wet the raw dry material is a ripe TYPHA ELIPHANTINA which is very effective and not prone to fungus.

PRACTICAL EXAMPLES

This product has been tried for the last 22 years by me on “N” no. of patients successfully and miraculously arresting the blood flow, who had accidental injuries on various parts of the body including that of the skull or the forehead, avoiding stitches to many patients and has shown to give good healing effect as well. This Product has shown not only to Seal but also to Heal the wound because of its antiseptic properties.
TEST RESULTS OF THE FORMULATIONS

In Vitro this has been tried out on 208 healthy blood donors,

A Study was conducted at the KING EDWARD MEMORIAL
HOSPITAL (K.E.M. Hospital) Blood Bank Mumbai by

Dr. Miss Neelam M.D. Pathology who was then the lecturer at the
K.E.M. hospital, Blood samples were collected from 208 healthy blood
donors who volunteered to donate 8 C.C. of extra blood for this study
(at least 11 donors refused to cooperate)

SAMPLE SIZE 208 HEALTHY BLOOD DONORS

2 C.C. of blood was taken in each test tube and shaken
vigorously till the blood clotted and the time taken for clotting was
noted.

4 test tubes were kept ready with the following,

➤ Test Tube A contained Processed Product
➤ Test Tube B contained Turmeric (Known coagulant)
➤ Test Tube C contained Cotton (known Absorbent)
➤ Test Tube D was kept Empty (plain blood)
After four days of studies and conducting IN VITRO TRIALS

On 208 healthy donors at the K.E.M.Hospital Mumbai

THE RESULTS OF THE STUDY WERE AS FOLLOWS

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GRAPHIC PRESENTATION OF THE AVERAGE OF BLOOD CLOTTING

TIME OF 208 HEALTHY DONORS

DETAILS AND ADVANTAGES OF INVENTION

- Product only of its kind in the world
- No prior product Available which can arrest oozing of blood from major cuts and wounds.
- Seals and Heals the Wound.
- Life saving Product
- The First, First-Aid in the First-Aid Box.
- A Household Emergency first Aid in every home
- Most useful in Emergency in Hospitals, Nursing homes, In casualty Wards, Schools, colleges, Offices, Factories, All Vehicles,
  In Defense Services, Universally anywhere.
• No panic running to doctors for Stitches of the wound.

• Treatment (Dressing) should be continued till the wound heals.

• Post dental Surgery, Tooth Extractions and bleeding of Guns.

**ONE LEADING DENTIST FROM MUMBAI-INDIA HAS CONDUCTED TRIALS ON SELECTED 7 CASES**

Out of these 7 cases 2 cases had previous history of post operative bleeding. In normal circumstances the dentist says he would have sutured the wound in order to control bleeding but instead he tried using this product which really worked like a wonder and the bleeding stopped without the need for suturing.

In 3 other cases though there was no history of bleeding, the extractions were traumatic and resulting wound was wider than average wound. Instead of suturing the Dr. used wonder and found to be 100% effective and stopped blood oozing and no suturing was required.

In two other cases where normal extractions were carried out small quantity of the product was used and it really gave dramatic results and stopped bleeding instantly.
MODE OF USE

Take the product double the size of the cut or the wound and press it on the injured part and tie a tight bandage to stop the blood oozing out instantly, if tying a bandage is not possible press the product on the injury till the product absorbs the oozing and arrests the bleeding process.

Open the bandage on the next day, wash the wound with boiled cooled water, on washing if bleeding continues seal it with the product and bandage it again or if the blood is under control apply the product with an adhesive medicated tape on it. Post dental extraction press a ball tight in the cavity from where the tooth is extracted and bleeding will stop.

In case of bleeding of gums keep it pressed tightly to the gums and hold

MODE OF USE IN DENTAL TREATMENT

In all above cases the product was used in the form of round balls (swabs), made from the product wrapped with gauge and made of the size of the dental cavity so as to fit the dental cavity for best results. As soon as the tooth is extracted this round ball of the product is pressed tightly into the cavity immediately to stop the blood oozing.

This product is odorless and tasteless and non toxic and non poisonous
I Claim

A process of manufacturing a haemostatic agent for stopping bleeding and healing of wounds which comprises of the following steps.

a) Selecting dry stems of a plant Typha Elphantina;

b) Separating cotton like substance from the stem of Typha Elphantina;

c) The substance is further Autoclaved to remove mites (if any) and avoid fungal growth;

d) The dried substance is further subjected to Pinning process for further purification of the product;

e) This dried product is further subjected to Grinding;

f) The material is then passed through finely meshed Sieve to obtain uniform mixing and proper uniform compound;

g) The grounded and sieved compound is subjected to Sterilization; (Gamma rays radiation)

h) After sterilization the resultant product is obtained.
ILLUSTRATION OF THE PRODUCT

SATISH SHANTARAM MOHILE

[SATISH SHANTARAM MOHILE]
# INTERNATIONAL SEARCH REPORT

## A. CLASSIFICATION OF SUBJECT MATTER

| IPC   | A61K35/78 |

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

| Minimum documentation searched (classification system followed by classification symbols) |
| IPC A61K |

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

## Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

- EPO-Internal
- CHEM ABS Data
- BIOSIS
- WPI Data
- PAJ
- MEDLINE
- EMBASE
- SCISEARCH
- NAPRALERT
- PASCAL

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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**Further documents are listed in the continuation of box C.**

**Patent family members are listed in annex.**

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**Date of the actual completion of the international search**

11 February 2004

**Name and mailing address of the ISA**

European Patent Office, P.B. 5816 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, TW 31 651 epi nl, Fax (+31-70) 340-5016

**Date of mailing of the international search report**

01/03/2004

Authorized officer

Markopoulos, E.
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