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(54) Titre : PREPARATION POUR LE TRAITEMENT DES VERRUES
(54) Title: ANTI-WART COMPOSITION

(57) Abrégé/Abstract:
The present invention pertains to a composition for use in the treatment of warts. The composition is used in the treatment of warts caused by human papilloma virus or against molluscum contagiosum. The composition comprises one or more topical keratolytic agents, a local anesthetic, and a topically acceptable carrier for the keratolytic agent and the anesthetic.

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Abstract of the Disclosure

The present invention pertains to a composition for use in the treatment of warts. The composition is used in the treatment of warts caused by human papilloma virus or against molluscum contagiosum. The composition comprises one or more topical keratolytic agents, a local anesthetic, and a topically acceptable carrier for the keratolytic agent and the anesthetic.

ANTI-WART COMPOSITION

The present invention pertains to a topical composition for use in the treatment of warts. The composition comprises at least one keratolytic agent, a local anesthetic, and a topically acceptable carrier.

Keratolytic agents are well known in the art as effective in removing warts and molluscum contagiosum as well as many other lesions which result from hyperkeratotic skin conditions. It is believed the mechanism of keratolytics involve the dissolution of intracellular cement substance, causing epidermal cells which are infected with wart causing virus to be mechanically removed. Normally these agents should not be allowed to contact noninfected skin as they are somewhat caustic in nature and have the potential to cause a great deal of localized pain.

Keratolytics appropriate for use in the present invention include, but are not limited to, salicylic acid, lactic acid, and either mono, di, or tri-chloroacetic acid.

The amount of keratolytic agent present will be that which is therapeutically effective against warts caused by human papilloma virus or against molluscum contagiosum. This is generally from about 15% to about 35% and preferably from 16.5% to 32% by weight of the composition.

Although lactic acid is not traditionally considered to be a keratolytic agent, its use in combination with salicylic acid or chloroacetic acid softens the skin thereby improving the keratolysis seen with either agent alone. When included, the amount of lactic acid present will be from about 1% to about 20% and preferably from 5% to 16.5% by weight of composition.

By incorporating a local anesthetic in compounds used for traditional wart therapy, the present invention alleviates the localized discomfort and irritation often associated with the application of keratolytics to the skin.

Local anesthetics appropriate for use in the present invention include, but are not limited to, esters of benzoic acid such as benzocaine, procaine, tetracaine, and chloroprocaine, and amides such as bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, and etidocaine.

The amount of local anesthetic present will be that which is effective in achieving localized anesthesia in the area to which the anti-wart agent is applied. This is generally from about 0.5% to about 15% and preferably from 1% to 10% by weight of composition.

The topically acceptable carrier is a fluid, e.g. liquid or gel. Preferably it is one which dries to a relatively clear and colorless film. Film forming fluids are able to provide a protective layer over the skin during therapy while remaining aesthetically pleasant. The amount of carrier present will be generally from about 20% to about 80% and preferably from 21% to 78% by weight of composition.

Examples of film forming fluids appropriate for use in the present invention include, but are not limited to, a flexible collodion or a liquid acrylic. Flexible collodion is preferred.

Flexible collodion is widely used in human and veterinary topical preparations. USP specifications call for a solution of nitrocellulose dissolved in 75 parts by volume of ethyl ether and 25 parts per volume of ethanol. The resultant product is a syrupy fluid, generally pale yellow

in color, which when applied to the skin and exposed to air forms a tough, and relatively clear film.

Any of a number of adjuvants which are traditionally included in topical pharmaceutical preparations can be incorporated into the present invention. These include, but are not limited to, ethanol, hydroxypropylcellulose, and water.

In another embodiment the present invention comprises a salt, the anion of which is the salicylic acid, lactic acid or chloroacetic acid anion and the cation of which is the protonated form of benzocaine, procaine, tetracaine, chloroprocaine, bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, or etidocaine.

The salt can be formed either in situ, i.e. by the contemporaneous application to the skin of an acidic keratolytic agent and a basic local anesthetic or prior to application when these two elements are brought together in a pharmaceutical preparation.

This embodiment further comprises a topically acceptable carrier for the salt. The carrier is a fluid, e.g. a liquid or a gel. The preferred carrier is a film forming fluid such as liquid acrylic or a flexible collodion. Flexible collodion again is preferred.

The present invention also includes the method of treating warts which comprises applying to the wart a composition comprising a therapeutically effective amount of at least one topical keratolytic agent such as salicylic acid, lactic acid, or chloroacetic acid and an anesthetically effective amount of a local anesthetic such as benzocaine, procaine, tetracaine, chloroprocaine, bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, or etidocaine.

The following examples will serve to further typify the nature of the invention but should not be construed as a limitation on the scope thereof which is defined solely by the amended claims.

Example 1

Ingredient	% Total Comp.
Flexible Collodion	21.800
Salicylic Acid	17.000
Benzocaine	10.000
Hydroxypropyl Cellulose	1.200
Ethanol (SD alcohol 40B)	q.s. to 100.000

The foregoing ingredients are combined in a suitable container and thoroughly mixed to form a uniform preparation. A small amount of the preparation is applied directly to the wart loci. The preparation dries to form a film on the skin.

Example 2

Ingredient	% Total Comp.
Salicylic Acid	27.000
Flexible Collodion	21.800
Lactic Acid	5.000
Hydroxypropyl Cellulose	1.500

Lidocaine.....1.000

Ethanol (SD alcohol 40B).....q.s. to 100.000

The foregoing ingredients are combined in a suitable container and thoroughly mixed to form a uniform preparation. A small amount of the preparation is applied directly to the wart loci. The preparation dries to form a film.

Example 3

Ingredient	% Total Comp.
Flexible Collodion	24.500
Chloroacetic Acid	17.000
Lactic Acid	5.000
Hydroxypropyl Cellulose	3.000
Lidocaine	2.000
Ethanol (SD alcohol 40B)	q.s. to 100.000

The foregoing ingredients are combined in a suitable container and thoroughly mixed to form a uniform preparation. A small amount of the preparation is applied directly to the wart loci. The preparation dries to form a film.

Example 4

Ingredient	% Total Comp.
Flexible Collodion	66.000
Salicylic Acid	16.500

Lactic Acid.....16.500

Tetracaine.....1.000

The foregoing ingredients are combined in a suitable container and thoroughly mixed to form a uniform preparation. A small amount of the preparation is applied directly to the wart loci. The preparation dries to form a film.

What is claimed is:

1. A composition for use in the treatment of warts comprising:

at least one topical keratolytic agent in an amount therapeutically effective against warts caused by human papilloma virus or against molluscum contagiosum,

an anesthetically effective amount of a local anesthetic, and

a topically acceptable carrier for said keratolytic agent and said anesthetic.

2. The composition according to claim 1 wherein said keratolytic agent is salicylic acid, lactic acid, or chloroacetic acid.

3. The composition according to claim 1 wherein said local anesthetic is benzocaine, procaine, tetracaine, chloroprocaine, bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, or etidocaine.

4. The composition according to claim 1 wherein said carrier is a film forming fluid.

5. The composition according to claim 4 wherein said film forming fluid is a flexible collodion.

6. The composition according to claim 4 wherein said film forming fluid is a liquid acrylic.

7. A salt, the anion of which is the salicylic acid, lactic acid or chloroacetic acid anion and the cation of which is the protonated benzocaine, procaine, tetracaine, chloroprocaine, bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, or etidocaine cation.

8. A composition comprising:

a salt according to claim 7, and

a topically acceptable carrier for said salt.

9. The composition according to claim 8 wherein said carrier is a film forming fluid.

10. The composition according to claim 9 wherein said carrier is a flexible collodion.

11. The composition according to claim 9 wherein said carrier is a liquid acrylic.

12. The use of a composition comprising a therapeutically effective amount of at least one topical keratolytic agent and an anesthetically effective amount of a local anesthetic to treat warts.

13. The use according to claim 12 wherein said keratolytic agent is salicylic acid, lactic acid, or chloroacetic acid.

14. The use according to claim 12 wherein said local anesthetic is benzocaine, procaine, tetracaine, chloroprocaine, bupivacaine, dibucaine, lidocaine, mepivacaine, prilocaine, or etidocaine.