ABSTRACT OF THE DISCLOSURE

Antigenic test applicator for effecting slight fracture of the outer surface of the skin to facilitate local absorption of antigenic test material with a minimum of trauma and without drawing blood including a solid elongated body that does not come to a point and hence does not penetrate, its outer applicator tip being provided with slightly spaced blunt, chisel-like tips or tines that are not razor sharp but merely sharply-edged defining a slot for antigenic test material, the solid body of the applicator below the slot eliminating any capillary action and thus conserving expensive antigenic test material as well as facilitating cleansing and sterilization of the applicator, the applicator being removably mountable on a support like a jeweler's vise for use and readily removable therefrom after use for cleansing and sterilization.

BRIEF SUMMARY OF INVENTION

This invention relates to applicators for applying antigenic test material to the skin of a patient and to facilitate its absorption by effecting slight fracture only of the outer surface of the patient's skin with a minimum of trauma and without drawing blood and without penetration.

The application of antigenic test material to the skin of a patient particularly when a plurality of successive allergy tests must be made, presents problems of minimizing pain and discomfort to the patient and prevention of scarring in successive test areas. Applicators heretofore used have involved use of sharp pointed needles or cutting devices designed to pierce, cut or penetrate the skin during application of the antigenic test material with resultant pain during application, material trauma and blood-letting and subsequent discomfort as well as possible residual scarring in the skin areas to which the test material was applied. In addition, the known devices have been wasteful of the expensive antigenic test material and frequently have deposited considerably more of such material to the skin areas during application than actually required for effective test purposes. Moreover, these known devices have been fairly difficult to clean and sterilize after use.

Objects and features of the present invention are the provision of a novel applicator for antigenic test materials that eliminates the foregoing disadvantages of known devices and is simple and inexpensive to manufacture, use and clean and sterilize for re-use.

The applicator embodying the invention embodies the following noteworthy features:

It is not designed to pierce, cut or penetrate the skin. It is designed merely to effect a slight "fracture" of the outer surface of the skin in a very small localized area in order to facilitate deposition into said area for local absorption therein of antigenic test material with a minimum of trauma and without drawing blood.

This applicator differs from known needle type applicators in that it does not cut the skin surface in any way and its use provides only a very small area of superficial trauma in contrast to those provided by said known needle type applicators.

The applicator tip of the device of this invention does not come to a point, but is rather provided there with a pair of blunt-chisel-like parallel edges defining between them a slot of limited width and depth in which an effective dosage of antigenic material is retained for deposit into a substantially circular "fracture" area in the outer skin surface caused by the edges when the applicator is applied to the patient's skin without, however, penetrating the skin.

The parallel tip edges are not razor sharp but relatively blunt, being only of sufficient sharpness to facilitate their fracture function.

The main body of the device of the invention is solid and hence there is no capillary action drawing excessive antigenic test material into a hollow barrel existing in conventional needle type applicators. This accomplishes two purposes: it conserves expensive antigenic test material and it facilitates sterilization thereby preventing any potential contaminating bacterial or especially viral which might occur through the patient contact.

The applicator of the invention is easily mounted in a holder, for example, a jeweler's pin vise for use and is readily removable therefrom after use for cleansing and sterilization prior to re-use.

The relatively simple construction of the applicator of this invention makes it inexpensive to manufacture and economical to use.

The avoidance of penetration and minimal trauma effected by each use of the applicator of this invention reduce dread in the patient and renders the latter more cooperative and more willing to undergo a series of necessary antigenic tests.

Other objects and features of the invention will become apparent from the following detailed description, and the accompanying drawings forming a part herof wherein:

FIG. 1 is an elevational view of an application embodiment the invention shown mounted for use in a holder;
FIG. 2 is a plan view seen from the top of FIG. 1;
FIG. 3 is a sectional view taken along line 3--3 of FIG. 1;
FIG. 4 is a sectional view taken along line 4--4 of FIG. 1, and
FIG. 5 is a side elevational view.

Referring to the drawing, the antigenic test material applicator of this invention is donated generally by the reference character 10. This applicator comprises an elongated, solid, cylindrical body 11 that may, for example, be approximately one and one-half inches long and about .041" in diameter. Preferably, this body 11 is made of stainless, surgical steel although other strong, sterilizable materials may be used instead.

The applicator end or tip of this body 11 is substantially perpendicular to the longitudinal axis of said body and is provided with a diometrically disposed and longitudinally extending substantially rectilinear slot 12 approximately .010" or less in width which extends longitudinally from the outer applicator end of body 11 to a depth of approximately $\frac{3}{4}$"-3 3/4" into said body, said slot 12 being centrally positioned at said applicator tip so as to provide symmetrical legs or tines 13, 14. The outer end wall portions of the respective tines 13 and 14 are bevelled inwardly at about 60° to provide relative chisel-like blunt transversely extending parallel end edges 13' and 14' which, while relatively sharp are not razor sharp or pointed and hence do not penetrate when applied to the skin of a patient, merely effecting a slight fracture only of the outer surface of such skin with a minimum of trauma and without drawing blood, and permitting the deposit of a small amount of antigenic test material held within the slot 12 into the small area of skin fracture whereby the deposited antigenic test material is readily
absorbed with a minimum of pain or discomfort to the patient. Moreover, since the portion of the body 11 below 3,512,520 is slot 12 is solid, there is no capillary absorption of 3. absorbed with a minimum of pain or discomfort to the patient. Moreover, since the portion of the body 11 below expensive antigenic material into said body when it is dipped into such material prior to application to the skin 4. of the patient. This makes use of the applicator of this invention very economical as no waste occurs. Moreover, 5. since no capillary absorption by the body occurs, the latter is easily cleansed and sterilized after each use. 6. The other end of said solid body 11 is readily mount-able into a holder 15, for example, of the jeweler's vise 7. type of conventional construction when antigenic test 8. material is to be applied to a patient, and readily removable therefrom after use for cleansing and sterilization. 9. It may be mounted in a molded plastic holder. 10. In use, the applicator tip is dipped into the desired 11. antigenic test material, a limited quantity being retained in the slot 12. Then, the applicator tip is applied to the 12. desired skin location of the patient by the operator so 13. that its blunt edges 13' and 14' effect a more or less 14. circular skin fracture limited substantially to the diameter of the applicator tip and the antigenic test material in 15. slot 12 is deposited in this limited fracture area for ready 16. absorption. A minimum trauma occurs and there is no skin penetration or drawing of blood.

While a specific embodiment of the invention has been 20. described and shown, variations within the scope of the appended claims are possible and are contemplated. There 21. is no intention, therefore, of limitation to the exact disclosure or abstract herein presented.

What is claimed is:

1. An antigenic test material applicator comprising a 25. solid, elongated body having a substantially uniform diameter throughout its length and having an applicator end, said end having therein a diametrically and longi-

2. An antigenic test material applicator according to 30. claim 1 wherein said body is cylindrical and approxi-

3. An antigenic test applicator according to claim 1 35. wherein said body is of stainless, surgical steel.

4. An antigenic test applicator according to claim 1 including support means for said body.

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