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ON THE THERAPEUTIC TESTING OF DERMATOLOGICAL REMEDIES.

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THAT the physician of to-day should know even the names of the innumerable new remedies upon the market is expecting a good deal. That he should attempt to test in his practice, more than a few of these is asking something impossible. If the physician happens to have tried some new drug in a number of cases and obtained good results, it will not often be necessary to urge upon him the advisability of publishing them. In doing so he can rest assured that his observations, even though prejudiced, will receive notice, as the medical profession is always eager to read reports of new remedies for which enthusiastic claims are made.

While many are only too eager to report favorable results from a new remedy used perhaps in a very limited number of cases, few are willing to record their failures even after having faithfully tested some new remedy. It is one of the objects of this communication to urge that not only the good, but also the bad results be published after a fairly thorough testing of a new drug. In the case of dermatological remedies the conditions are peculiarly favorable for a fair and honest comparison. Whenever a new ointment or lotion is tried, the writer cannot too strongly urge that it be used upon one side or region of the body in comparison with another ointment or lotion used simultaneously upon the opposite side or other region. When the eruption is situated upon the extremities and is symmetrical, the conditions for a fair comparison are all that could be desired.

Sometime ago a series of experiments was undertaken by the writer to test the value of anthrasol, a preparation that has been highly recommended and that is manufactured by Knoll & Co. To the above firm, one of high reputation, the writer wishes to express his thanks for kindly supplying him with anthrasol for his experiments. In writing unfavorably of anthrasol, there is no desire to withhold praise for the attempt of the manufacturers to put upon the market a purified and improved preparation of tar. Praise should be given Drs. Vieth and Sack for analyzing tar and testing its separate constituents from a dermatological standpoint. The

analysis of the tar ordinarily used in medicine showed it to consist according to Vieth, of first, acid constituents, chiefly phenols; second, basic constituents chiefly pyridin; third, neutral distillable constituents, chiefly the tar hydrocarbons; fourth, pitch. Therapeutic experiments showed that only the phenols and hydrocarbons were of dermatological interest. The antipruritic results were due to the phenols, while the characteristic effects of tar were due to the hydrocarbons. The pyridin and the pitch were the unnecessary and injurious elements.

Anthrasol as put upon the market, is a pale yellow liquid of the consistency of olive oil, from which the coloring matter and injurious constituents have been removed. It has less of the odor that is characteristic of other tar preparations, being due in part to the addition of a little oil of peppermint.

The fact that anthrasol is colorless must in all fairness be admitted to be an advantage of importance. The writer is willing to say that if a clean, but only moderately efficient preparation of tar is desired, anthrasol will fill the requirements. With regard to the question of efficiency the case is, however, decidedly different. The coloring matter, impurities and injurious (?) constituents of the tar have been removed, but with them have apparently been removed much of the efficacy of the drug. The case is somewhat similar to the change that has been brought about by refining chrysarobin, a change that is better appreciated by the older dermatologists. The chrysarobin of to-day is frequently " refined " to such a degree that half its potency is gone.

In regard to the claim that anthrasol has not the disagreeeble odor of other tar preparations it may be said that few patients even in private practice object to the odor of tar. In this connection it may be mentioned that the druggist who dispensed the anthrasol at the hospital frequently complained of the odor which it left upon the hands. She did not on the other hand consider the odor of oil of cade to be disagreeable.

From the writings of some well known dermatologists who speak in praise of anthrasol, the impression is obtained that it is equal or superior to other preparations of tar. The claims of the circular sent to physicians that " anthrasol possesses itch-allaying and kerato-plastic action in a still higher degree than common tar " are certainly not borne out by the experience of the writer.

The cases selected for treatment were subacute and chronic forms of eczema which were suitable for tar therapy in general. For

convenience, cases were chosen which involved the extremities and in which the distribution of the lesions was about equal in extent. If there was any inequality in the severity or extent of the patches anthrasol was invariably used upon the side least involved.

Certain difficulties were naturally to be encountered in attempting such a comparative therapeutic test. It was necessary to choose intelligent patients to properly carry out the treatment. It was also necessary that they should cheerfully co-operate in what was plainly an experiment. In most cases a ten per cent. ointment was used, in a few cases twenty to twenty-five per cent. ointment and in others equal parts of the tar and alcohol. It was difficult to follow many of the patients to a complete cure. In several cases the patient discontinued the use of anthrasol and continued the treatment on both sides with the other ointment. Other patients left the clinic, not wishing further experimentation. Before beginning the tests it was agreed with the representative of Knoll that the results of treatment, whether good or bad, would be published. It was also agreed, that it was fair to anthrasol, to use it in the same strength as the other preparation with which it was compared.

The preparation of tar used in most of the following cases for comparison with anthrasol was the oil of cade. In a few of the cases pine tar (pix liquida) was the preparation employed.

Case 1. Woman 40 years of age. Eczema of backs of hands and fingers, extending upon palms. Duration six months.

May 16, 1907. Anthrasol 10 per cent. right hand, pine tar 10 per cent left hand.

May 23, 1907. Both hands improved. No difference between two sides.

May 28, 1907. Right hand (anthrasol) slightly better.

July 22, 1907. Both hands well. Patient states that left hand (pine tar) was cured a week before right (anthrasol).

Result: Pine tar and anthrasol practically the same.

Case 2. Woman 28 years of age. Eczema of backs of hands and forearms. Duration three years on hand, one year on arms.

May 7, 1907. Anthrasol 6% on right side, cade 6% on left side.

May 14, 1907. Left side (cade) better than right though neither much improved.

May 28, 1907. Left side (cade) greatly improved. Right hand only slightly improved.

Result: In favor of cade.

Case 3. Woman 30 years of age. Eczema of backs of hands. Duration, past five years on and off.

May 1, 1907. Anthrasol 10% right, cade 10% left.

May 8, 1907. Left side (cade) looks slightly better.

May 22, 1907. Left side better than right, less infiltrated, less scaly and "feels better."

May 27, 1907. Both hands improving, left still more than right.
June 12, 1907. Relapse due to dietary indiscretion and both hands now as bad as at first.
Result: In favor of cade.

Case 4. Man 60 years of age. Eczema of backs of forearms, hands and wrists. Duration three months.
May 11, 1907. Anthrasol 10% right, pine tar 10% left.
May 18, 1907. Left side (pine tar) better than right.
May 25, 1907. Both improved, left more than right.
June 8, 1907. Left hand nearly well. Right hand improved, though much less than left.
June 20, 1907. Left forearm now well. Left hand very much improved, and eruption now much less extensive than on right.
Result: Decidedly in favor of pine tar.

Case 5. Woman 45 years of age. Eczema of hands, fingers and wrists. Eruption somewhat more extensive on right hand. Duration six months.
May 22, 1907. Anthrasol 10% right, cade 10% left.
May 29, 1907. Left hand (cade) looks slightly better and "feels better" than right.
June 12, 1907. Both hands considerably improved, left slightly better than right.
June 19, 1907. Both hands improving. Difference in favor of left.
June 29, 1907. Both greatly improved. Left slightly smoother and eruption less extensive.
Aug. 12, 1907. Left hand (cade) almost well. Right improved, though not as much as left.
Result: Slightly in favor of cade.

Case 6. Woman 21 years of age. Eczema of palms and sides of fingers, left side more extensive than right. Duration past three years on and off. Present attack two months.
May 25, 1907. Anthrasol 10% right, pine tar 10% left.
June 27, 1907. Both hands improved, but left (pine tar) is smoother and less reddened. Patient, however, says that right hand "feels better."
July 22, 1907. No change. Patient writes later that she considers anthrasol superior in lessening itching.
Result: About same. According to patient's statement anthrasol was better, while according to observation pine tar appeared to be superior.

Case 7. Man 22 years of age. Eczema of backs of hands, more extensive on right side. Duration one year.
April 30, 1907. Anthrasol 10% right, cade 10% left.
May 9, 1907. Left hand (cade) very much better than right.
Result: Decidedly in favor of cade.

Case 8. Woman 26 years of age. Eczema of palms of left hand and three fingers of right hand. Duration eight months.
May 23, 1907. Anthrasol 10% right, cade 10% left.
June 27, 1907. Left hand (cade) almost well. Has improved much more than right.
Result: Decidedly in favor of cade.

Case 9. Woman 19 years of age. Eczema of hands, more extensive on right. Duration one year.

Nov. 15, 1907. Anthrasol 10% left, cade 10% right.
Nov. 19, 1907. Right hand (cade) much better than left.
Nov. 26, 1907. Right hand relapsed. Both hands same as at beginning of treatment.
Jan. 7, 1908. Treatment begun again. Fifty per cent. anthrasol in alcohol for left and fifty per cent. cade in alcohol for right.
Jan. 14, 1908. Right hand (cade) markedly better.
Jan. 28, 1908. Right hand almost well, left not as far advanced.
Feb. 4, 1908. Right hand practically well. Left hand still infiltrated, fissured and itchy.
Feb. 11, 1908. Right hand well. Left hand still rough and cracked.
Feb. 18, 1908. Gave up anthrasol in disgust and used cade for left hand, which is now also nearly well.
Result: Greatly in favor of cade.

Case 10. Woman 44 years of age. Eczema of palms. Duration, patch on right hand three months, on left hand two months.
Feb. 4, 1908. Anthrasol 10% right, cade 10% left.
Feb. 11, 1908. Both hands appear alike. Left "feels" a little better.
Mar. 3, 1908. Used both ointments for two weeks. At end of this time, as right hand (anthrasol) became even worse, she gave up anthrasol and used cade for both hands, which are improved but not quite well.
Result: Greatly in favor of cade.

Case 11. Woman 41 years of age. Eczema of backs of hands and fingers. Duration one month.
May 30, 1908. Anthrasol 10% right, cade 10% left.
April 3, 1908. Both hands improving.
April 29, 1908. Patient gave up anthrasol, considering cade to be better, and used cade for both hands, which are rapidly improving.
Result: Greatly in favor of cade.

Case 12. Boy 16 years of age. Eczema of backs of fingers. Right side somewhat more extensive than left. Duration four months.
April 24, 1908. Anthrasol 25% left, cade 25% right.
May 1, 1908. Some improvement, apparently equal on both sides, though patient thinks anthrasol has done the best.
Result: In favor of anthrasol.

Case 13. Woman 48 years of age. Eczema of backs of hands. Duration four months.
May 2, 1908. Anthrasol 10% right, cade 10% left.
May 9, 1908. Both hands improved, left (cade) more than right.
May 12, 1908. Left hand decidedly better than right.
May 18, 1908. Both hands improving, left still better.
Dec. 5, 1908. Discontinued treatment in interim, due to serious illness. Hands again relapsed. Same ointments renewed.
Dec. 19, 1908. Left hand (cade) more improved than right.
Result: In favor of cade.

Case 14. Woman 19 years of age. Eczema of backs of hands. Duration three years on and off.
May 22, 1908. Anthrasol 10% right, cade 10% left.
May 29, 1908. Left hand (cade) shows more improvement.
June 5, 1908. Left hand shows striking improvement over right.

June 12, 1908. Left hand well. Patient gave up anthrasol and used cade for right hand, which, while not yet well, shows more improvement than from any application of anthrasol.

Result: Greatly in favor of cade.

Case 15. Woman 39 years of age. Eczema of backs of hands and fingers. Left hand more extensive. Duration six months.

June 23, 1908. Anthrasol 10% right, cade 10% left.

June 27, 1908. Both hands improving.

July 2, 1908. Both hands improving.

July 9, 1908. No improvement in either hand.

July 10, 1908. Both hands about same, with possible slight advantage for anthrasol.

Result: Slightly in favor of anthrasol, although more extensive side treated with cade.

Case 16. Woman 22 years of age. Eczema of fingers. Duration eight months.

July 29, 1908. Anthrasol 10% right, cade 10% left.

Aug. 4, 1908. Both hands show improvement about equal in amount.

Result: The same.

Case 17. Woman 18 years of age. Eczema on soles of feet.

June 30, 1908. Anthrasol 10% right, cade 10% left.

July 3, 1908. Both about same.

Result: The same.

Case 18. Man 35 years of age. Eczema of knuckles. Duration, every winter for past seven years upon right hand, past two years on left hand.

Nov. 9, 1908. Anthrasol 10% left, cade 10% right.

Nov. 23, 1908. Patient found the cade to be so much better that he used it for both hands, which are now greatly improved. Itching was relieved by the cade alone.

Result: Greatly in favor of cade.

Case 19. Woman 50 years of age. Eczema of palms and fingers. Right hand, especially palm, considerably worse than left. Duration two months.

June 13, 1908. Anthrasol 10% left, cade 10% right.

June 23, 1908. Both hands look about the same. Left hand (anthrasol) "feels" a little better.

June 30, 1908. Both hands improved. Left hand looks and feels slightly better.

Result: Slightly in favor of anthrasol.

Case 20. Woman 22 years of age. Eczema of backs of forearms. Left side considerably more severe and extensive. Duration six weeks.

Dec. 26, 1908. Anthrasol 10% right side, cade 10% left.

Jan. 9, 1909. Both sides better, about equal now. Patient says left hand (cade) was quickest to improve. Anthrasol 25% right, cade 25% left.

Jan. 16, 1909. Both sides greatly improved, left still better.

Jan. 30, 1909. Discontinued anthrasol on own initiative and used cade for both hands. Both hands nearly well.

Result: Greatly in favor of cade.

Case 21. Man 58 years of age. Eczema of backs of hands and fingers. Three times as extensive on right hand, also more severe. Duration nine months.

Jan. 19, 1909. Anthrasol 10% left, cade 10% right.

Jan. 23, 1909. Right hand (cade) decidedly better. Patient wishes to discontinue anthrasol. Says left hand is more "irritated."
Jan. 30, 1909. Both hands improving. Cade better objectively and subjectively. Anthrasol 25% left, cade 25% right.
Feb. 6, 1909. Right hand decidedly better than left.
Feb. 13, 1909. Patient gave up anthrasol and used cade for both hands, which are now practically well.
Result: Greatly in favor of cade.

Case 22. Woman 38 years of age. Eczema of fingers, more severe on right hand. Duration one and one-half years.
Jan. 19, 1909. Anthrasol 10% right, cade 10% left.
Jan. 26, 1909. Both hands equally improved. Patient thinks cade does most good.
Jan. 30, 1909. Both improving, especially right, which is nearly well. Anthrasol 25% left, cade 25% right.
Feb. 3, 1909. Both hands nearly well. Patient thinks cade best.
Result: Favors cade.

Case 23. Woman 38 years of age. Eczema of fingers. More extensive and severe on right side. Duration four weeks.
Feb. 18, 1909. Anthrasol 10% left, cade 10% right.
Feb. 24, 1909. Both hands better. Improvement of right hand much more marked. Patient considers cade better.
Result: In favor of cade.

Case 24. Woman 48 years of age. Eczema of palms. Twice as extensive on left side as on right. Duration three years.
Feb. 16, 1909. Anthrasol, alcohol, olive oil equal parts, right side; cade, alcohol, olive oil equal parts, left side.
Feb. 20, 1909. Medication too strong, change to anthrasol 10% right, cade 10% left.
Mar. 6, 1909. Both palms better. Improvement about equal. Patient thinks anthrasol better.
Mar. 13, 1909. Both hands better. Improvement same. Patient thinks ointment of equal value.
Result: The same.

Case 25. Woman 40 years of age. Eczema of fingers. Three times as extensive on right side. Duration three months.
Feb. 17, 1909. Anthrasol 10% left, cade 10% right.
Feb. 24, 1909. Greater improvement of left side (anthrasol).
Mar. 3, 1909. Both hands improving, especially right (cade). Patient now thinks cade better.
Mar. 10, 1909. Left hand (anthrasol) more improved than right.
Mar. 17, 1909. Both hands practically well. Patient's final opinion is that cade is more efficacious than anthrasol.
Result: About the same.

To summarize, there were three cases in which pine tar was used in comparison with anthrasol. In two of these cases the result was the same, while in the third there was a decided advantage in favor of pine tar.

Of the twenty-three remaining cases in which the oil of cade

was compared with anthrasol, four shared no difference between the two preparations, three gave results favorable to anthrasol, whereas fifteen showed results in favor of oil of cade. In the cases favoring anthrasol the difference was very slight, while in at least ten of the fifteen cases favoring oil of cade, the difference was most marked.

The number of cases quoted, while not large, suffices in the writer's opinion to show that a much vaunted new remedy (anthrasol) is decidedly inferior to an old and tried remedy (oil of cade) in the treatment of certain forms of eczema. This opinion is unanimously shared by the writer's colleagues who kindly observed the cases during treatment at the clinic. For the material obtained from the service of the writer's father, Dr. George Henry Fox, at the Skin and Cancer Hospital, and from the service of Dr. George T. Jackson at the Vanderbilt Clinic, the writer wishes to express his thanks.

CONCLUSIONS

First. Not only favorable, but also unfavorable results should be recorded after a therapeutic trial of a new drug.

Second. In the case of ointments and lotions the new remedy should be used upon one side of the body in comparison with an old and tried remedy used simultaneously upon the opposite side.

Third. Anthrasol is a cleanly and moderately efficient preparation of tar in cases of subacute and chronic eczema. It is, however, decidedly less efficient for the purpose than the oil of cade.

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