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DERMATOLOGY AND SYPHILOLOGY

2 October 1964

Dr. John Creech, Medical Director,
B. F. Goodrich Company,
Bells Lane,
Louisville, Kentucky.

Re:

Dear Dr. Creech:

First of all, I should like to preface this letter by stating that this report is based in its entirety on an original report done by my associate Dr. James F. Molloy. In my opinion, he has done a superb job of investigation, and not only has he examined the original patient whom you referred to us, but has examined three other of your employees, and in addition has made a personal trip to the B. F. Goodrich plant, in order that he could better understand the exact type of work which these men had been doing. Incidentally, I also have examined these men and we have discussed the case together in great detail.

I am enclosing a summary of our information to date obtained on this patient. This includes a re-reading by Dr. A. J. Miller of the original biopsy done in 1959, as well as some preliminary patchtesting carried out during the last week. In addition, I might add that the recent biopsies that we took were definitely compatible with a diagnosis of scleroderma. This is not only our opinion, but is also the opinion of Dr. A. J. Miller our pathologist.

It is needless to repeat the history in detail here, inasmuch as it was exactly the same as that obtained by Dr. Dyer, as well as the staff at the V. A. Hospital.

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Essentially, the history of this patient is that he was first employed by the B. F. Goodrich Company in June 1955 as a chemical helper. The first symptoms were of tender hands, and this was first noted in June 1956. He was laid off in 1958 for nine months and apparently improved during this period of time. He states he was unemployed for a while during this period. He worked for the American Radiator and Standard Sanitary for three months as a stockworker and at International Harvester for six weeks as an assembly worker. He returned to the B. F. Goodrich Company in September 1958, approximately, and worked in the high car department for two months. In November 1958, he returned to work as a chemical helper. Several months later his hands became worse. During the period of 1959 when he was in the V. A. Hospital his hands again appeared to improve, but upon returning to work as a chemical helper he again noticed an exacerbation of his symptoms.

Last May, or thereabouts, he was again taken off work and apparently had definite improvement in that the pain symptoms have practically disappeared. Apparently, since then the radiographic studies have also shown a tendency to some bone regeneration.

The original biopsy taken by Dr. Mapother has been re-examined by Dr. A. J. Miller, who states: "I have re-examined the sections labelled D-6451, taken from patient which you requested. According to the report, I did not see much at the time, and looking at them now I am wondering if this could be a scleroderma, since the dermis region is composed of such huge, dense, collagenous fibrils. There was no history given at the time of the original biopsy, and I apparently disregarded the dermis entirely, but believe I should not have overlooked it. The inflammatory reaction is practically nil."

We have taken another biopsy from : which was again submitted to Dr. Miller for examination with additional requests for calcium stain, mucin stain and elastic tissue stains. To date, none of the special stains have been done but the H.E. stains reveal a picture definitely compatible with scleroderma. It may be several weeks before we get to see these special slides.

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We have carried out on patchtesting to the crude unmodified materials which were sent into our office. For convenience, we have merely labeled these A, B, C, and D. These were placed on the right arm along with a control. Inasmuch as these were dry patchtests, they were left on for five days in the usual manner. Recipe A, C and the control were negative. Recipe D was a plus minus reaction and of no significance. Recipe B gave a one plus positive reaction. This is of some interest to us, inasmuch as we expected all of these routine patchtests to be negative. Furthermore, patchtests were carried out on two other men. One had completely negative results. The other had positive patchtests to Recipes B and D, similar to , the strongest reaction occurring to Recipe B.

Incidentally, these samples were coded at the time of the patchtesting so as not to prejudice any readings. They have recently been decoded, and this code is listed at the end of this letter.

Very frankly, at the present time we cannot interpret this as an allergic reaction. It may be a primary irritant reaction. Our expectation was that all of the tests would be negative and that we would probably have to go no further along this line. With positive reactions at four sites in three patients, we will probably have to proceed further by (1) reducing the particle size of the material to a standard, and (2) by calibrating the parts per million in a concentration to be applied in the patchtests, and (3) by doing dilutions of 1:10 and 1:100 and 1:1000. These further procedures will indicate to us whether we are dealing with a primary irritant or an allergic reaction.

At this point, it is felt that we can definitely rule out scleroderma as such, as a diagnosis, as well as Raynand's disease.

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Raynaud's phenomenon of industrial origin is well known. It occurs anywhere from one to twentyfour months after the use of vibratory tools. It occurs in a variety of age groups. It is a vascular phenomenon which is unaccompanied by scleroderma like skin lesions and is likewise unaccompanied by osseous changes. and the other patients do not fit this group by any stretch of the imagination because these bony changes which you have discovered, occurred early and the cutaneous fibrosis which we see in these people, to our knowledge and search of the literature, has never been reported in Raynaud's phenomenon of industrial origin.

Scleroderma itself, was also considered. This is a disease with a female to male sex ratio of 3:1. Raynaud's phenomenon is present in 94% of the case. The sedimentation rate is almost uniformly elevated. The serum gamma globulins are elevated. The esophageal changes are noted in 70% of the cases and bone absorption of the distal phalanges are noted in association with actual calcification of the subcutaneous tissue as an extremely late manifestation in 62% of the cases. This skin calcification and bone absorption in classical scleroderma occurs on an average of eleven years after the onset of the disease. In case, we have an erythrocite sedimentation rate of 4 mms., a normal serum electrophoresis and no evidence of esophageal changes.

This has led us to the conclusion that we are dealing with a slightly different entity which we are calling, for the lack of a better name, "Epidemic Scleroderma".

In conclusion, our findings lead us to conclude that the present dermatological and vascular condition, is in all probability to a major degree, dependent upon the patient's industrial exposures.

I am enclosing, along with this letter, the material put together by Dr. James F. Molloy, and this includes epidemiological data; working summary of cases of "Epidemic Scleroderma", and a brief summary.

Please be assured of my appreciation for the privilege of seeing these most interesting cases, and I trust that we shall be able to carry out for you and the B. F. Goodrich Company, additional investigative procedures.

Very sincerely yours

A. B. Loveman M.D.

A. B. Loveman, M.D.

cc. DR. REX WILSON

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