

CONFIDENTIAL

EXHIBIT
P-0049

Raymond
Schulz

58

August 16, 1949

CONFIDENTIAL

Dr. G. C. Nelson,
Medical Officer for Monsanto Chemical Company,
Nitro, W. Va.

Dear Dr. Nelson:

Between my first visit to your plant on May 8, 1949, and my second visit on August 5, 1949, there occurred 52 new cases of chloracne. Some of these workers are new employees and others are maintenance men, but all of them had worked in Building 41 or had handled equipment that had been in Building 41 at the time of the accident. None of the new cases are as severe as those first seen in May.

In addition two cases of chloracne occurred in a father and his child who had purchased a car ridden in a truck which was near Building 41 at the time of the accident and had been contaminated with the chemicals escaping from the reaction kettle.

The development of new cases since my last visit indicates that the Building 41, and its immediate surroundings are still contaminated with the discharges from the kettle at the time of the accident. The indication is strengthened by the fact that workers in the other buildings have not been affected.

While most of the 26 cases seen at my first visit on May 8, 1949, show improvement, especially those who have been transferred to other buildings, some of those who are still employed in Building 41 have developed new areas of chloracne. This also indicates that Building 41 is still contaminated.

The following thirty-one employees were presented for examination.

1. Jonathan Hurley. Entered building the day of accident. Eight days later he noticed a reaction on his face accompanied by marked edema. The hands also became affected.

Now presents a mild erythema of face with edema around the eyes. There are small brown spots on the face and there is no melanosis.

Treatment as described.

On 8/5/49, still shows erythema and edema about the eyes. No melanosis. The body now shows many comedones and a few scattered pustules on the anterior surface of the trunk; the back is clear. In addition, there are a few broken pustules on the anterior or posterior surfaces of the thighs.

This patient complains of muscle aches in the legs that are much more severe at night.

2. James F. Howe. Area supervisor. Entered the building immediately after the accident. Reaction on face about 8 days after. No hand with degree of melanosis and a few small spots on the left cheek.

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Prognosis: good.

Treatment suggested: Scrub face with Tersus or 5% solution of Santonorse immediately before retiring at night. Follow this by the application to the face of Lotic 1121 to which 3% Resorcinol has been added. Wash face in the morning upon arising with Tersus or Santonorse.

Each day a few of the cysts should be emptied of their contents by expression. Comedone forceps may be used for this purpose and the cysts may be superficially incised to permit the contents to be more easily expressed. The patient should avoid exposure to strong sunlight.

On 8/5/49 still has mild chloracne of face. There are only a very few lesions now. There is a mild degree of melanosis about the eyes. No apparent change in patient's condition.

3. Mr. L. M. Hurley. Entered the building about 2 weeks after accident. Rash appeared on face 2 weeks later.

Now shows comedones around external orbital region and acne-like lesions on extensor surface of forearms and knees.

Treatment: as for case 2.

On 8/5/49 still has many comedones and lesions. The back of the neck and axillae now show many lesions as well as the forearms and knees. This worker continued working in the building after the explosion. Mr. Hurley also complains of severe pain in the legs. This man was removed out of Building 41.

4. Ival McClanahan. Entered building 1 hour after accident. Felt no immediate effects, but had a headache the next day and 6 days later the face became swollen and an eruption appeared.

Now presents a marked melanosis, and many small cysts on face giving the appearance and feel of ground glass. Has numerous straw colored acne-like cysts on the upper eyelids. Also shows the scars of old acne vulgaris.

Treatment: same as case 2.

On 8/5/49 still shows marked involvement posterior surface of neck and behind the ear. In addition now presents pustular lesions on trunk and buttocks. Melanosis subsiding (color lighter). At present off work in this building.

5. Goodrow Brown. Entered building the day after accident. Rash on face appeared 1 week later. Now presents melanosis and numerous acne-like cysts and pustules on the face.

Treatment: as outlined for case 2.

On 8/5/49 shows marked improvement. However, posterior aspect of neck appears worse. This man has been off work for the past 4 weeks.

6. Harry Humall. Was working on a broken valve taken from the building. Three days later he became sick and vomited blood for 2 days. A rash appeared on his ears.

Now presents marked melanosis of the face and pea sized acne-like cysts on the face. On later cysts on the anterior surface of the legs and thighs.

Treatment: as for case 2.

8/5/49 color still dark. Face is markedly improved; posterior aspect of neck, however, is worse. Lesions on legs have also improved. Patient complains of pain in legs and in eyes. On examination outer surface of eyelids appears thinner.

7. Brady Linders. Entered the building immediately after the accident. He felt no immediate effect, but the next day he had the headache, elevation of temperature, generalized erythema and vomiting.

Now shows a marked tar color melanosis of face and many small acne-like cysts. The legs and thighs are also affected.

Treatment advised: same as for previous case. In addition liver function tests should be done.

8/5/49. Very much better, melanosis nearly gone. Still presents acne-like lesions on arms and legs. Back of neck clear. This patient also complains of pain in the legs at times.

8. Harold Young. Entered building the day after the accident. Rash appeared on face 6 days later and face became swollen. Melanosis appeared several days later after X-ray treatment was begun.

Now presents extreme degree of melanosis and many acne-like cysts on the face. The hands and arms to just above the wrists are also melanotic. The unexposed portions of the body are normal white.

Treatment: as outlined for case 2.

8/5/49. Still melanotic but less so than when first seen. Face is much smoother now. Anterior surface of neck not affected; the arms, however, show few comedone-like scattered lesions. This patient also complains of pains in leg muscles.

9. Ralph Markham. Pipe-fitter went into the building the day after the accident and handled contaminated apparatus. Three days later the face became edematous and a rash appeared on the face and thighs.

Now shows melanosis of face and scattered acne-like cysts. The anterior surface of the thighs is erythematous and desquamating.

Treatment: as outlined for case 2.

8/5/49. Face markedly improved but back, thighs, buttocks, and penis show many lesions now. Numerous comedones on legs, practically every follicle shows lesions.

Patient stated wife shows similar lesions. Advised to bring his wife in to see Dr. Nelson.

10. John Hein. Entered building the day of accident. Rash appeared on face 9 days later. Now presents marked melanosis and numerous tiny cysts on cheeks, giving the face the appearance of ground glass.

Treatment: as outlined in case 1.

8/5/49. Much better than when first seen. Melanosis has also improved. Now has many large pustular lesions on cheeks and under chin (secondary infection).

11. James Markham. Pipe-fitter. Entered building 11 days after the accident and about 11 days later noticed edema, pruritus and eruption on the face.

Now presents marked melanosis of face and scattered acne-like cysts on the face and anterior surface of the lower third of thighs.

Treatment as outlined for case 1.

8/5/49. Condition much improved. Melanosis subsiding. Lesions on face and thighs near improvement. Now has some lesions on back of neck. This patient also complains of joint and muscle pains. All joints suggested are sites of pain.

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12. A. H. Lane. Entered building 6 days after the accident. Noticed a burning of the face 2 days later.

Now shows a few acne-like cysts and slight melanosis.

Treatment: as for case 2.

8/5/49. Melanosis much improved. Shows many blackheads on forehead. Lesions on face much more numerous. Also complains of pain, which affects neck and arm, no leg pains.

13. Rucl Tucker. Entered building about 1 month after the accident. Two days later an eruption appeared on the face.

Now presents slight melanosis only, no cysts.

Treatment: is practically well.

8/5/49. Shows marked improvement. Skin almost entirely clear, presents few lesions left malar region. Complains of pain in left hip and leg. This man has been working in Building 41 all the time.

14. Eugene Cunningham. Entered building one month after the accident and after working 12 days noticed eruption around the ears.

Now presents mild degree of melanosis, some grouped acne-like cysts around chin and mouth. Some lesions also on anterior lower third of thighs.

Treatment: as in case 2.

8/4/49. Melanosis improved. Now presents under lower jaw cystic lesions with secondary pyogenic infection; in addition, presents a few lesions on the back of the neck.

15. Gene Thomas. Entered building about one month after the accident and eruption appeared on the face 3 days later.

Now presents mild erythema of face but numerous acne-like lesions on the cheeks and chin.

Treatment as in case 2.

8/5/49. Has more lesions on face, chin, and forehead than were present when first seen. In addition, presents lesions on back of neck now. Has mild folliculitis of legs (heavily). This man also complains of joint pains; these not present now.

Recommendations: Remove worker from Building 41.

16. David Milan. Entered building one month after the accident and eruption appeared 4 days later.

Now presents a few acne-like lesions on the nose and the forearms.

Treatment: as in case 2.

8/5/49. No. Has many large acne-like lesions over forehead area of face, chin, and neck and back of neck. Lesions on forearms better.

Recommendations: If gets worse remove from Building 41.

17. Cecil Cunningham. Entered building immediately after the accident. Rash on face appeared 3 days later.

Now presents a few acne-like cysts on legs near the ankles and on thighs near the knees. The face is practically clear. Slight melanosis.

Treatment: is practically well.

8/5/49. Melanosis improved. Has continued to work in Building 41 since eruption. Has few more lesions (cysts) on face; posterior aspect of neck shows a marked pyogenic reaction after ankles and thighs improving.

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18. Carl Haring. Entered building the evening of the accident and remained for 2 hours. On March 30, the eruption appeared on the face. Now presents a few acne-like cysts on the face and on the ears. There is only a slight melanosis. Treatment as above.

8/5/49. Melanosis subsided. Face lesions no worse, however, does present some lesions on the back of the neck. In addition, presents many follicular lesions over the trunk especially about the umbilicus and over the buttocks. This man also has continued to work in Building 41 all the time.

19. R. L. Shank. Building foreman. Entered building immediately after accident. Eruption appeared 3 - 4 days later. Has been in building every day since. Has slight melanosis of face. Acne-like lesions on buttocks and sides.

Treatment: is practically well.

8/5/49. Still shows slight melanosis on face. Lesions on face more numerous and presents many large cysts and pustules on the back of the neck. Patient has scattered lesions over the trunk. This worker has continued working in Building 41 all the time. Mr. Shank also complains of severe pain in the legs.

Patients examined for first time 8/5/49.

20. James E. Sheets, age 6. Eruption began in March 1949, a few days after playing in truck purchased by his father from the Monsanto Chemical Company. The truck was contaminated at the time of the explosion. Both the boy and his father developed severe chloracne from contacting the truck.

This patient presents the typical comedone acne syndrome on both cheeks, bridge of nose, forehead, chin, neck and about the axilla. Is under the appropriate treatment as advised for the other patients at the time of the first visit.

21. J. C. Steele. Maintenance man. This worker entered the building for the first time several months after the accident. At present complains of an eruption on his face of 3 weeks duration, this eruption began 1 week after entering the building.

Presents a few impetiginous lesions on the chin while over the nose, behind ears, back of neck there are present a few straw colored cysts typical of chloracne. In addition, the arms and buttocks present a mild folliculitis. This patient also complains of pains in legs and neck. Suggest 5% ammoniated mercury ointment for impetiginous lesions of the chin. In addition to treatment as previously outlined for the chloracne.

22. Roy Smith. Maintenance man. Entered Building 41 first time since accident about 1 year ago. Has been working steadily in Building 41 since.

Presents slight melanosis and acne lesions on upper lip. In addition, there are a few lesions present on the chin, over the bridge of the nose, in the eyebrows and scattered lesions over the arms and legs. This worker also complains of pains in the legs.

23. Cleo Smith. Does not come in contact with Building 41. Works in Building 34 where is exposed to chlor-phenol in the finishing process.

Presents a few lesions on his face, back of neck at the hair line and over the trunk. Mild chloracne. This man also complains of muscle pains (neck).

24. Howard Toney. Maintenance man. Presents a few scattered erythematous-follicular and pustular lesions over the trunk, especially abdomen. Some of the lesions resemble cysts. There are in addition scattered lesions over the buttocks and about the axillary folds.

Impression: mild chloracne. It is felt that heat alone is a factor in this case.

25. Frank West. Maintenance man. Went in building 41 for the first time 5 weeks ago. Presents a few lesions on the face which resemble a folliculitis. No typical lesions of chloracne. Also presents a few follicular, pustular lesions over the upper thighs and buttocks. Doubtful case.

26. John Blackwell. Worked in Building 41 before and after the explosion in March. This worker had no skin lesions in May at the time the plant was first visited. Developed skin lesions during the past 6 weeks.

Presents early lesions of chloracne over the face, forehead, posterior aspect of neck, chest, axillae, and over the trunk.

Is under regular treatment.

27. Paul Willard. Has always worked in Building 41 before and since the explosion in March.

Presents a few chloracne lesions on sides of face, behind ears, and back of neck. In addition, presents many lesions over the penis, buttocks and about the umbilicus.

This patient complains of severe joint pains in the legs and back.

28. Blond Cortney. Began working in Building 41, May 2, 1949. Did not work in this building previously and has continued to work in this building since the above date. Skin eruption began about the middle of May.

Shows a slight melanosis especially marked about the left eye. Presents a mild chloracne involving the face, ears, forearms, front of legs and buttocks. No lesions on the neck.

29. Negar Riddle. Has always worked in Building 41. Has not worked during past 4 weeks. Presents many chloracne lesions of the face, chin, neck, under jaw, forearms, legs, and trunk.

This worker also complains of leg pains.

30. Bill Truman. Began working in building 41 sometime in May. Eruption began in early May. Presents a few lesions on the face, neck, and trunk. The trunk is comparatively free.

Presents comparatively few lesions over the face, and large and white the right ear and many large lesions over the posterior aspect of the neck. The forearms show involvement but the trunk is comparatively free.

This worker also complains of pains in joints (neck and ankle).

31. George Simmons. Began working in building 41 3 months ago and has continued to work there since.

Fair melanotic. The sides of the face, back of neck, axillae, forearms, thighs, legs, forearms, and buttocks present clear cutaneous lesions.

All the patients examined are under dermatologic treatment except patient #27, Paul

It will be noted that many of the workers complain of pain in the legs. It was at first thought that these were of psychogenic origin in some, and malingery in others, but after listening to all the symptoms I am forced to believe that it is part of the symptom complex of the same industrial exposure which caused the chloracne. This is the first time to my knowledge that chloracne was accompanied by muscular pains, therefore I cannot suggest any specific treatment. I think however, that massage and diathermy may be beneficial.

In my opinion the skin of the patients under treatment have improved, especially those who have been removed from Building 41. The number of lesions have diminished and the melanosis is fading out.

The following procedures are recommended.

1. Scrapings from the walls, ceilings, machinery, etc., be examined for the presence of chlorophenols to determine points of greatest contamination.
2. Building 41 and everything inside of it, kettles, machinery, walls, floors, windows, etc., be decontaminated by hand scrubbing with strong soap and water and using stiff brushes liberally.
3. The outside walls, roof and immediate vicinity of Building 41, be given the same treatment. It may be necessary to close operations in the building for several days in order to accomplish this.
4. After the cleansing, scrapings should again be examined for chlorophenols to determine the efficacy of the decontamination.
5. Workers engaged in this work should wear impervious coveralls, gloves and boots and use a protective ointment, (Nest #55) on exposed parts such as the face and neck. After the day's work they should take a cleansing shower and make a complete change of clothes.
6. Workers in the building after the clean up should be supplied daily with clean underclothes, work clothes and protective ointment.
7. They should take all morning showers after work. It is suggested that showering be done before lunch.
8. A number of the cases show a complicating syphilis vulgaris, and it is suggested that these cases should sterilize their razors before using them. They should wash the face with soap and water before shaving and use alcohol on the face as an antiseptic after shaving. The face have marked pustular or impetiginous lesions should take 600,000 units of oral penicillin daily.
9. For local avoidance to syphilis vulgaris and pustular lesions I prefer 1% mercuric borate ointment, 5%, or Unguent. Quinolor soap. Instead of an anti-tibiotic.

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10. The severe cases of chloroform should be removed from Building A1 until such a time as we are satisfied that it is safe for them to return.

11. Whatever clothes the workers in Building A1 wore at the time of the accident and to the final decontamination recommended above, should be "dry cleaned" or burned.

12. It would be advisable for me to see the patients at 2 month intervals.

Sincerely yours,

Louis Schwartz, M. D.

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