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Industrial Commission Case No. OD-19933.

White male. Age 49 years. Married.

Occupation

Prior to May of 1940 this man worked for 14 consecutive years as a spray painter in the Williamsburg Chair Company. He did finishing on all kinds of furniture using stain, filler, varnish, enamel and lacquer. Spray painting was done without using a mask of any sort. It was done in a small booth with a ventilator fan in the back of the booth. He never worked with any one type of spray agent for more than a short period of time and was usually exposed to several of them in any given day. For that reason he is unaware that any specific one might have injured him. As far as he knows there was no change in the nature of the ingredients used in his spray paint with the exception that about 2-1/2 years ago what he calls a synthetic enamel was added to the armamentarium of finishing agents. He is unaware that this might have affected him any differently than any of the other agents which he had used. Up until 2 years ago he had not lost one day of work and had continued exactly the same kind of work for 14 years. Because of illness he was laid up for 3 weeks during the month of May and when he came back to work in June he was put on a new job in the wrapping room where he worked until September, when quit work entirely because of disability. There are several men working at the spray painting job; some of whom have worked nearly as long as he has. None has lost any time from this occupation. There is one man, a Mr. Granville Smith, whom the patient believes to be ill with a similar disorder to his own, but who has not quit work because of it.

Present illness

About 2 years ago this man was rather suddenly seized with a "spell" which he describes as extreme weakness associated with sweating, dizziness, intense nausea and severe colicky pain in the abdomen. This was associated with severe constipation. He was laid up in bed for about a week where he was treated by his private physician. His private physician thought that he had naphtha poisoning at that time. After a period of one week he was able to go back to work. He worked for a period of 3 or 4 months during which his only complaint was mild weakness and continued constipation. After about 4 months he had a similar attack which laid him up for 3 or 4 days. Since that time and until May of 1940 he had several similar such attacks

(doesn't know exactly how many) which varied little in character with the exception that besides having the symptoms above described they now became associated with rather severe frontal and bitemporal headache and some aching pains in the bones and joints of his legs. In May, 1940, he had a similar attack, unusually severe and collapsed while at work. He was taken home and put to bed where his doctor diagnosed naphtha poisoning. This diagnosis was made because of the intense odor of this solvent upon his clothes. This time besides the above symptoms he also had marked anorexia. The colicky pains in the abdomen would last anywhere from 1/2 hour to 2 hours and then disappear followed by generalized soreness in the abdomen. Sometimes there would also be rather severe pains in his knee and upper leg. Occasionally there was some chest pain at the base of the neck with no characteristic radiation. This time he was laid up in bed 3 weeks and improved very little that time. His constipation was so intense that he had to have cathartics almost daily and was given several enemas. With this illness he began to lose weight and from May until about 2 months ago had lost 18 pounds. He has now gained about 6 of it back. About the 1st of June he felt somewhat better and decided to go back to work and ask his employer for a new job, which was given him. He then worked in the wrapping room for a period of 3 months and during this 3 months he had continued weight loss, frequent attacks of abdominal discomfort which grew a little less in frequency, associated marked soreness and pains in his legs and profound weakness. He ceased work in September of 1940 largely because of profound weakness, nervousness, abdominal discomfort and constipation. Associated with the illness in May and continuing to the present time have been the additional symptoms of insomnia without known reasons so far as the patient is concerned. There have been no abnormal dreams. There has been increasing nervousness and marked sweating throughout the day. He never vomited. His stools have never been other than normal in color and so far as he knows have not changed in caliber. There has been no bleeding from the gums, no cough with hemoptysis and no evidence of purpura.

Past history

He was born in Brown County and has lived there all of his life. As a child he had measles, chicken-pox, whooping cough and typhoid fever. Had mild influenza in 1918. No operations. No serious accidents. No history of venereal disease. Maximum weight 15 years ago was 160 lbs. Up until last May he averaged about 150 lbs. He then lost to 133 in September. In the last 6 weeks he has gained some of that weight back and is at the present time at 140 lbs.

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Marital history

Married in 1912. Has 2 boys. Wife had one still-birth 9 years ago. No miscarriages. Wife living and well. Two boys living and well.

Family history

Mother died of pneumonia at age 75. Father was killed in an accident. Two brothers living and well. One sister died - cause unknown. No history of family tuberculosis, diabetes, carcinoma, heart trouble, hypertension or insanity.

Social history

Owns a small 4-room house on a small farm. Lives with his wife and 2 boys. They have an outside toilet. He works a good deal in the garden during the summertime, but has not been able to be out since his illness last spring. Smokes moderately using a pipe or cigarettes. Used no alcoholic beverages at all in the last year, had an occasional beer before that. Drinks a very moderate amount of coffee; no tea. Diet has always been adequate, but since the onset of his anorexia he feels that he has not eaten sufficiently.

Systems history

Head - Prior to his present illness he had never had a headache. Since that time with each bout of abdominal discomfort and with weakness he has had bitemporal and frontal headache which is rather severe in character. It usually comes on in the a.m. and disappears by evening.

Eyes - No trouble until about 6 months ago when he noticed that he no longer could read as well as he could. He attributes this to his increasing age.

Nose and throat - Negative. No history of frequent colds. Tonsils in.

Ears - Negative.

Teeth - Had all teeth removed about 6 years ago because of marked pyorrhea. Has upper and lower plates.

Neck - Negative. No history of goiter.

Respiratory system - No history of chronic cough, bronchitis or tuberculosis. Has experienced some shortness of breath on exertion either at work or about the house for the past 2 years. This has never been profound. No pains in the chest except as described under present illness, and these were rather vague in nature with no specific and no definite radiation.

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Cardiovascular system - Since May of 1940 has experienced palpitation quite frequently. When he lies down at night he feels a throbbing in each temple and he is unable to lie on the left side partly because of the loud beating of his heart when he does so. He has had no peripheral edema. There has been some nocturnal dyspnea of a very mild type but this seems to be more associated with restlessness than anything else. He has no orthopnea. There has been no definite anginal pain.

Gastrointestinal system - Prior to the onset of his present illness he was almost unaware of having a G.I. tract. His bowels moved regularly without any medication of any sort. He ate well and did vigorous work both in the shop and at home. Since the onset of his present illness he has had the above described pains and has had almost constant constipation. He believes that the frequency of the attacks of pain and the constipation have markedly diminished since last summer, but he still has to take cathartics frequently. He has had no jaundice; he has had no bloody, tarry or clay-colored stools. When he has the attacks of abdominal pain they are severe and cramping in nature, and are generalized. There is no specific part of the abdomen which is more affected than the rest. It is not associated with distention. The last one was about a month ago.

Genitourinary system - Five years ago he had a kidney stone which he passed spontaneously without a severe renal colic. Since that time he has had no G.U. symptoms except an occasional nocturia. There has been no pain on urination; no difficulty in starting the stream; and no hematuria.

Neuromuscular system - Except for pains in his legs, particularly about the knee joints, and generalized weakness he has had no specific complaints referable to his neuromuscular system either during or previous to the present illness.

Mental state

This man is very cooperative though this type of examination is new to him and he is somewhat frightened by it. His memory seems quite clear, and I think that it is only recently that he has come to the conclusion that he will not get well. He has thought that the illness which he had was due to his occupation, because his doctor told him so, but until very recently there has been no doubt in his mind that he would be able to go back to work. He is reasonably intelligent; has had no psychotic manifestations so far as I am able to determine. Ever since May and with

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increasing severity he has been unable to sleep at night. He knows no reason for it. He says the pattern of his thoughts at night are quite changeable and never of a particularly depressing nature. When he goes to sleep he sleeps soundly for a short period and then awakens and has great difficulty in going back to sleep again.

Physical Examination

Weight 139-1/2 Height 68" Temp. 98.2 Pulse 86 Resp. 28 B.P. on the right 190/120; on the left 180/115 Grip: right 60; left 40

This patient is a relatively well developed but poorly nourished white male of approximately 50 years of age who appears to be chronically ill. His hair is gray. His skin is smooth, warm and extremely moist. He sweats profusely all the time and from every portion of his skin.

Head - The head is well formed, and there are no abnormalities.

Eyes - The vision is somewhat poor. There is some presbyopia. The pupils are equal measuring 3 mm in diameter and react rapidly to light and accommodation. The extra ocular movements are normal. There is no nystagmus or hippus. There is no exophthalmos or enophthalmos. Examination of the fundi show the arteries narrowed and tortuous. There is no exudate. The optic nerve head and maculae are normal.

Nose - Negative.

Ears - Both tympanic membranes are slightly reddened. Air conduction is less than bone conduction. Air conduction is reduced approximately 40%. The Weber does not lateralize.

Mouth and throat - The mucous membranes appear somewhat pallid. The tongue is normal. All of the teeth have been replaced by artificial dentures. The tonsils are small and atrophic. The throat is negative. The gag reflex is present.

Neck - The neck is quite thin and mobile. There is no tracheal tug. I believe that there is a slight enlargement of the left lobe of the thyroid gland.

Lymphatic system - There are a few lymph nodes in the submaxillary region on both sides and a few in the inguinal region. No others. None of these is particularly remarkable.

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Physical Examination (Cont.)

Chest - The chest is symmetrical and moves well.

Lungs - The lungs are clear on auscultation and percussion. The diaphragms move well. The breath sounds are normal.

Heart - The heart is somewhat enlarged to the left. The maximal apical impulse is 9-1/2 to 10 cm from the midsternal line in the 6th interspace. The impulse is abnormally vigorous. The heart sounds are of normal quality. A_2 is greater than P_2. There is a soft systolic apical murmur. The peripheral arteries are somewhat thickened but not particularly tortuous. The veins are negative. There is no evidence of increased venous pressure. There is no evidence of congestive heart failure.

Abdomen - The abdomen is soft and flat. There is very slight generalized tenderness. No organs or masses are palpable. There are no hernias. The abdominal aorta is easily palpable and is not widened.

Genitalia - The external genitalia are negative. In the right groin there is a small black pedunculated mole.

Rectal examination - Sphincter normal. There are a few external and internal hemorrhoids which are not painful. The prostate is enlarged. Both lateral lobes are enlarged and irregular. They are non-tender, and not unusually hard. The seminal vesicles are negative.

Extremities - The extremities are well formed. The arches of the feet are somewhat flattened. There seems to be a generalized muscular weakness which is not specific in any group. There is no deformity of the bones or joints. No tenderness.

Back - The spine is straight. There is a moderate degree of tenderness in the right costovertebral angle. The kidneys are not palpable.

Neurological examination

Cranial nerves:

1. Negative
2. Negative
3, 4 + 6. Negative
7. Muscles of expression are normal.

Taste on the anterior two-thirds of the tongue is present and normal.

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Physical Examination (Cont.)

5. Sensations about the face are normal. Muscles of mastication appear to be equal.
8. Hearing is reduced. I believe this is not nerve deafness but conduction deafness.
9. The gag reflexes are present. Taste on the posterior one-third of the tongue is normal.
10. Normal
11. Normal
12. The tongue protrudes in the midline with a considerable degree of tremor.

Motor system - There is generalized muscular weakness. There is tremor of the tongue, of the head, of the fingers and of the feet. All of the deep tendon reflexes appear markedly hyperactive. They are all present. There are no pathological tendon reflexes. Superficial reflexes of the abdomen are extremely active as well. There is an unsustained patellar and ankle clonus. Babinski, Oppenheim and Gordon are negative. Hoffman negative. Muscular tone is diminished. Romberg and Kernig negative.

Sensory system - There is no alteration of light touch, pinprick, vibration, stereognosis or equilibrium.

Summary of positive findings

There is evidence of arteriosclerosis both in the eyegrounds and in the larger peripheral arteries. There is evidence of hypertension and hypertrophy of the heart. There is a palpable but slight enlargement of the left lobe of the thyroid and associated with it one finds a generalized tremor, marked hyperactivity of all reflexes, warm, moist skin and general muscular weakness. There is a moderate degree of conduction deafness. There is a moderate diminution in visual acuity. There is a general appearance of a malnourished and chronically ill man. He has chronic benign prostatic hypertrophy.

Laboratory data

Urine

Clear, yellow. Acid. Sp. gr. 1.018 Albumin negative. Sugar negative. Sediment negative.

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Laboratory data (Cont.)

Blood

RBC 4,630,000
WBC 9.050
Hb 104%

Differential:

Polys.	72.5
Bands.	3.5
Lymphs.	15.5
Monos.	8
Eosins.	0.5

B.M.R. -4 (good record)

Blood cholesterol 160 mg %

X-ray

Chest plate shows some enlargement of the heart in the region of the left ventricle and a somewhat prominent aortic knob.

Progress note

After a night's rest the physical examination is unchanged except that there is much less evidence of sweating and tremor. The reflexes are still markedly hyperactive.

Discussion

The nature of this man's illness cannot be determined at this time, with assurance, because of the disappearance of the physical and laboratory evidence which may have been present last May. That it was occupational in origin seems reasonably certain from the history. The extreme hyperreflexia, and the autonomic imbalance, while due possibly to hyperthyroidism, may well be residua of his previous intoxication. The role of hyperthyroidism may be tested therapeutically by administering Lugol's Solution, Gtt. XV tid for two weeks, and his physician has been so advised.

The intoxication may have been due to lead absorption, and this seems likely from the clinical picture. It may have been due to severe exposure to lacquer solvents, which, in our experience, can produce various disturbances of the nervous system.

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Associated, and probably unrelated abnormalities are present in the form of hypertension, moderate cardiac hypertrophy without evidences of failure, benign prostatic hypertrophy, diminished auditory (conduction) and visual acuity.

Despite the cardio-vascular abnormalities, it would seem that this man would improve considerably under proper therapy, and that he could engage in light restricted activity for several years to come.

Suggested therapy consists of inducing gain in weight and improved nutrition by increasing the diet and augmenting it with vitamins. Light exercise (walking) out of doors should be encouraged, thereby lessening the need for cathartics and promoting restful sleep. The use of Lugol's Solution will determine whether or not such therapy will prove beneficial. A thorough urological study, some months hence, is indicated to determine the degree, if any, of renal damage, and further therapy, or the desirability of surgical intervention will be indicated by the results.

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