GAS NEUROSIS SYNDROME.

By HAROLD S. HULBERT, M. D., CHICAGO,

*Formerly Lieutenant Med. Corps, U. S. N. Reserve, Psychiatrist
U. S. S. Leviathan.*

Among the invalided troops a new syndrome has been observed and recognized. This is called "gas neurosis," because of its similarity to so-called "shell shock" of the non-concussive type, a common war neurosis. It is found only in men who have been gassed. The severity of the symptoms is not in proportion to the amount of gas inhaled nor in proportion to the duration of the gas attack, but is in proportion to the maladjustment to military life and is in proportion to the individuals' mental and emotional make-up and instability. Many soldiers who have been lightly or severely gassed with correspondingly slight or severe impairment of the lung tissues or skin show on examination none of the symptoms of this syndrome. On the other hand, troops with this syndrome show gradations from healthy lungs and skin and give a history of "I only got a whiff of gas" to angry deep burns or lungs so diseased that auscultation fails to reveal any appreciable amount of sound pulmonary tissue and give a history of becoming unconscious from the gas or having torn off the suffocating mask. In less than a majority of the cases there has been exposure to shell fire or concussion. This condition has been variously diagnosed as tics, epilepsy, constitutional psychopathic state, deficient mental development, mental deficiency, various psychoses, etc.

In the men who developed gas neurosis, very shortly after they are gassed and sometimes before they reach the first hospital, symptoms appeared which continued after treatment of the lungs or skin had been discontinued. As seen in the wards these symptoms include the following: Spasmodic dilatation of the nostrils, spasmodic opening of the mouth, especially drawing down the lower lip, convulsive movements of the platysma myoides, facial appearance of anxiety, gasping for breath, painful paræsthesiæ, even unconscious movements of the hands like clawing at the

throat or removing a mask, attacks of delirium or stupor, and even unconsciousness with writhing convulsions. With these may be associated stuttering, deep breathing or sighing, palpitation, and compulsive movements of the hands or feet. There is usually severe insomnia with vivid troublesome dreams based on military or previous unpleasant experiences, and these dreams are frequently colored by the local environment and risks. These symptoms are inconstant, and may be absent when the patient is distracted, may become more severe if the patient is worried or placed in a situation of helplessness, may change to imitate other patients' symptoms, and may be revived by contact with odors, such as over-chlorinated water or mustard relish at the table.

Early treatment naturally is limited by the brevity of hospitalization and by local conditions such as crowding, discipline, etc. Gas neurosis patients are particularly amenable to suggestion and rest. Optimism based on exact diagnosis and sincere faith in ultimate recovery is excellent therapy. By ultimate recovery is meant returning the individual to his normal, whether or not his normal is the normal of others of his race and station; if a neurotic person or a case of constitutional psychopathic personality develops gas neurosis, he may be cured of the symptoms of the gas neurosis but not of his neurotic or psychopathic make-up. Incorrect diagnosis of epilepsy, or organic lesions of the central nervous system, or of insanity lead to wrong or inadequate treatment and so depress the patients that they become chronic and less amenable to treatment. The fear of being sent to asylums or treated as insane or kept with insane is cruel and is deleterious to recovery.

In the future we may expect a great many cases of tuberculosis to develop in the partially destroyed or diseased lungs of soldiers who have been gassed. We are accustomed to certain physical and mental conditions to be associated with tuberculosis, *e. g.*, dilated nostrils and other signs of air hunger in severe or terminal cases, and optimism and complacency while resting in bed. But when tuberculosis develops in men who have been gassed and who have also a return of the symptoms of gas neurosis, a new picture will be presented which will be confusing unless we are alert to detect and to understand it. The patients may present signs of air hunger and anxiety and alterations of consciousness and of voluntary motor control out of proportion with the severity of the

tubercle bacillus infection; and also they may be restless and even disobedient, thus making treatment very difficult. Therefore in the ultimate disposition of these cases when discharged from military service, they should be encouraged to live in such ways and in such places that there will be the minimum risk of acquiring tuberculosis.

Gas neurosis may largely be prevented. Military mental hygiene has never been well developed. Our young men have not been taught to aspire to a proper place in any just warfare. Personal privilege has been esteemed more important than sacrifice for the state. There are large numbers of men who went from a sense of duty but with distaste or horror for war, and who long to be at home for some personal or physical reasons, often feeling that affairs at home will not be properly carried on or completed in their absence. These men may be heroically faithful, but they are not contented warriors. Home to them is not a moral support to be good soldiers, but home is ever tempting them unconsciously to leave the hardships of military life and of war to return home. If these men are of limited judgment, of emotional instability, or of too high ideals, the sickness of being gassed may result in incapacitating symptoms without organic basis for origin or continuation. Our troops at home and abroad have had an awe-inspiring education of the unbelievable horrors of being gassed; for this reason gas neurosis will be increasingly prevalent until the American people and the American military men assume a rational attitude toward gas as one of the common weapons of warfare against which we have excellent protection. The more gas was played up in the press and in talks as super-horrible, the more the Huns were accomplishing their policy of winning by fright of Schrecklichkeit. Discontented soldiers with morbid ignorant fear of being gassed, when gassed, are predisposed to gas neurosis. Knowing the cause, the symptoms, and the treatment, gas neurosis should be recognized, but not feared.

CONCLUSIONS.

I. Gas neurosis syndrome is similar to the non-concussion type of so-called "shell shock" or war neurosis, and is found in those who have been exposed to gas warfare.

2. The symptoms of this functional neurosis are various degrees of physical movements related to altered or increased respiration, anxiety, altered consciousness and involuntary motor movements. If the disorder is clearly recognized and correctly diagnosed, early and suitable treatment will cause recovery.

3. Its severity is not in proportion to the organic damage from being gassed, but is in proportion to the make-up and military maladjustment of the individuals affected.

4. Pathological emphasis on gas warfare in the training of soldiers and in popular education of civil communities, as well as inadequate military mental hygiene of those participating in warfare, exaggerates the idea of risk, makes the soldiers discontented, and predisposes them to incapacitating neuroses.