The father was a pigeon fancier and stated that the child had been found eating the pigeons' food. Professor J. Small of Queen's University kindly examined a specimen of the food but found no evidence of ergot. I hear that the patient has made a complete recovery.

Discussion

In the absence of diabetes, gross arterial sclerosis, a history of Raynaud's phenomenon, of any acute severe infection, or of ergot poisoning, it was considered that the cases must be classified in that somewhat rare group, peripheral gangrene without obvious cause. Lewis and Pickering (1934) have classified cases of bilateral gangrene of the digits, apart from the true Raynaud's phenomenon, into: (a) bilateral gangrene of digits in the young and with infection; (b) bilateral gangrene of digits with haemoglobinuria from cold; (c) bilateral gangrene of digits in the elderly and with disease of small arteries. None of the cases which they describe so accurately appear to me to be identical with the cases here recorded. A review of the available literature shows that most of the cases reported can be classified as Lewis and Pickering suggest, but some remain obscure in origin. O'Leary (1937) describes three cases of peripheral gangrene following pregnancy: one of these patients had had a single dose of ergotamine tartrate, which was not considered to be a factor in the gangrene. Many cases have been recorded following pneumonia in children (Uhr, 1938; Smith, 1932; Loubat *et al.*, 1937; Rohmer, 1934); and occasionally in adults (Pagniez, Plichet, and Koang, 1933; Dufour, 1901; Nielsen, 1878). It has also been described following scarlet fever (Cust, 1937; Blumberger, 1936; Dick, Miller, and Edmondson, 1934). In his paper on gangrene in scarlet fever and diphtheria Blumberger says it is a very rare complication, usually massive, even affecting a whole limb. He quotes Schick as having seen only one case in diphtheria in all his experience. It is most apt to occur in the third week of either disease. Bartsocas and Grigoriou of Athens (1937) and Winstead (1935) have described a fatal case of gangrene following measles in a child aged 2, and Stoesser and Lockwood (1938) have recorded a case complicating chicken-pox and associated thrombocytopenia. A gangrenous form of purpura was described in 1884 by Martin de Grimard in his Paris thesis, to which attention is drawn by Paul Chevallier (1937). Other blood changes are occasionally recorded, as in Gorter and Broekema's case (1938), in which eosinophilia in a child aged 2½ was found associated with cyanosis, gangrene of the feet, and increased intracranial tension for no obvious cause. Symmetrical gangrene due to ergot may follow medicinal doses of the drug as in the case recorded by Yater and Cahill (1936), in which gangrene followed the injection of ergotamine tartrate administered for the relief of the pruritus of jaundice. Lead may apparently cause a syndrome: Vigdortschik (1934) has described such a case, and considers that the percentage of gangrene was ten times higher in lead workers than in others. Presumably such cases are associated with arterial disease. Sometimes the cause in recorded cases has remained completely obscure, as in that described by Weissenbach, Martineau, Malinsky, and Brocard (1935), when a man aged 31 developed patches of gangrene in the tips of his fingers, some of the affected fingers having several discrete areas of gangrene separated by tracts of apparently healthy skin. In the absence of demonstrable cause the authors recorded the case as one of arteriolar infection of obscure origin. Mienicki (1934) described the case of a married woman aged 24 who in November, 1933, developed patches of gangrene in the

right forearm which healed with much scarring in the course of two months. In May, 1934, she developed the same condition in the other arm. *Staphylococcus aureus* was found, and the patient showed increased sensitivity to staphylococcal vaccine.

The patients whose cases are here reported are now said to be in good health. It will be interesting to determine whether either of them develops the Raynaud syndrome as a sequel to the acute attack.

Summary

Two cases of peripheral gangrene of ears, fingers, and toes are described; no cause could be found, and both recovered.

A brief review of relevant available literature shows that, apart from arteriosclerosis, diabetes, and Raynaud's disease, peripheral gangrene may arise as a result of ergot and lead poisoning, pregnancy, pneumonia, scarlet fever, diphtheria, measles, chicken-pox, and purpura. In some recorded cases no cause for the condition could be found.

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PANIC STATES IN CIVILIANS

BY

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There has been much discussion about the possibility of the war causing an increase in neuroses and psychoses in civilians who are exposed to difficulties and privations and who may be open to direct attack. However, Henderson (1940) believes that the danger of civilian breakdowns is not so great as is sometimes feared, and, commenting on his experience up to the present, says: "All people, men and women, are standing up to the strain of war conditions with fortitude, and although unfortunate and tragic cases occur, yet, on the whole, the position is accepted with equanimity."

Our experience in the Jordanburn Nerve Hospital is that these breakdowns have been uncommon and have occurred essentially in predisposed persons, who have long suffered from emotional instability, neurotic symptoms, and so on, but were able to make a reasonable adaptation. The war has been the last of many difficulties, and it has immediately precipitated the illness. No breakdown has yet been seen in a civilian who was of well-adapted personality before the war. On the other hand, I have tried to exclude from the series patients in whom the war circumstances were only incidental and not the acute precipitating factor. About seven cases remain—civilians whose first actually incapacitating breakdown appears to have been acutely

precipitated by the war. Five records are summarized to show the important predisposing factors that were also present.

Case I: An Anxiety State

A man aged 44, living at Rosyth, became acutely anxious during the bombing raid on the Fleet in the Forth on October 16, 1939. After the all-clear signal he intended to cycle to his work, but "something went wrong" with him and he cycled many miles to the north. He wandered about the country for three days looking for work and sleeping in a deserted cottage. His mind was quite clear all the time and he had a full recollection of what he did. On the third day he returned home, intending to get some more clothes and go away again, but he was too weak to do so. Two days later he was admitted to hospital in a state of fairly acute anxiety and sleeplessness.

Previous History.—Three relations, including the father, were patients in mental hospitals. The parents were theatrical people and the patient was brought up by other relations, who pampered him. As a child he was timid, being afraid of strangers, of the dark, and of blood. He cried easily and was "ragged" at school. At 13 he was put in the care of strangers who drank heavily and treated him so unkindly that he ran away at the age of 15. He was brought back, but ran away again at 17 and found work. In 1915, at the age of 19, he joined the Army and saw much fighting in the front line. He was invalided with pneumonia and had a prolonged convalescence—nine months—although there were no complications. He again saw service at the front, and in 1918 was taken prisoner. He had unpleasant experiences as a prisoner of war. After repatriation the patient settled down to work and was twelve years in his last job. He was married, but there was a complete temperamental incompatibility between him and his wife. The patient was interested in books and in politics, and seemed to take little interest in his family, while the wife was the opposite. Innumerable petty differences arose, which in their sum produced a difficult situation. For years there has been no marital intercourse. Ever since the last war the patient has suffered from such neurotic symptoms as headaches, nail-biting, sleeplessness, irritability, and fear of thunder. In August, 1938, he fell at his work and suffered a compound fracture of the right ankle. He was still in hospital in September, 1938, when it was evacuated. There were difficulties about his compensation. He returned to work. When war broke out he evacuated with his family, but the wife insisted upon their all returning after four days. The patient was most unwilling to do so, and spent his free time gazing eastwards and wondering when the Germans would come.

Progress.—Fear of the war situation remained great and nothing would induce him to return to Rosyth. With psychotherapeutic treatment he slowly and gradually improved, and in February he was discharged to a new home in Dunfermline. He remains apprehensive, but has made an adjustment and has returned to work.

Case II: Neurasthenia

A clerk in a Government office, aged 50, had, after the crisis in September, 1938, to work much overtime, assume greater responsibility, and train new-comers. He became worried, had difficulty in concentrating, and his appetite and sleep became poor. A few days after the declaration of war he had to take sick leave. His prominent complaint was mental fatigue, with slowness and difficulty in concentrating, slowness of memory, and diminished attention. He also had bodily fatigue, impairment of appetite and sleep, headaches, flushing, indefinite eye symptoms, and discomfort in the back. The difficulty with the mental processes was always the prominent symptom; there were no anxious or depressive symptoms and no organic cause for the condition.

This case corresponds closely to the group of cases described by Barton Hall (1939). Hall's patients had been doing skilled responsible work in rearmament, etc., under conditions of rush and overtime. They developed, in the words of Tredgold, "incapacity for sustained efforts, either

mental or physical, inability to make decisions, faulty attention and memory, loss of emotional control, and increased irritability."

Previous History.—A sister has had a somewhat similar condition, which has dragged on for almost ten years. The patient had been a shy, sensitive, and self-conscious youth who had some minor sexual difficulties. He served throughout the last war. At the end of 1917 he was invalided with pneumonia and empyema, but was soon able to do farm work. He began to complain of headaches and weakness in the back, without being actually incapacitated. He attended a number of medical boards and received a small permanent pension. After the last war he entered his present employment and found the work not unduly hard. Ever since that war he has complained at intervals of headaches, weakness in the back, flushing, a bursting feeling in the head which he thought might be due to high blood pressure, pains in the arms, and fatigue of mind and body. He drank rather more than he should, felt sexually impotent, and never married. During the last year or two he has been worried about the health and the business affairs of two sisters.

Progress.—The patient improved, returned to work for two months, but is now again incapacitated with the same symptoms.

Case III: A Schizoid State

A conscientious objector aged 28 has been a member of the Methodist Peace Fellowship for two years. Throughout the year before hostilities he was constantly worried by the danger of war and pictured vividly to himself all its possible horrors. After the war began he suffered endless conflict between his convictions and the opposite views of the majority. He analysed most minutely the origin, motives, and purpose of his conscientious objection. This gradually led to an unhappy state of obsessive thinking in which he was obliged to analyse the motive of every little act in his present and past life. He often concluded that his motives were unworthy and selfish.

He first attended in December, 1939. It was found that acute anxiety attacks and somatic anxiety symptoms had begun during the period of worry in the earlier part of the year, and that obsessive thinking had developed as above. There were also distressing obsessive thoughts of a sexual kind. He had short depressed periods in which he had compulsive thinking of a schizoid character. "What if God had manifested Himself in me and I am a failure?" had to be analysed infinitely. In these periods he was persuaded that he was the lowest of the low and that he was doomed to hell; he had feelings of influence, in which something like a voice commanded his movements and suggested he commit suicide. These periods passed quickly, leaving the more usual anxious and obsessive symptoms.

Previous History.—His earliest recollection is of seeing the damage done to buildings in air raids during the last war. The father had a similar breakdown in his youth and has complained of his stomach ever since. He was always a stern, distant, and parsimonious parent. The mother died of heart disease when the patient was about 15. The patient's bodily complaints resemble those of his parents. Throughout his life he has had anxious symptoms, without any actual breakdown. As a child he feared his father, would not go to bed until assured there were no animals about, had many nightmares of lions, and suffered from diurnal faecal incontinence until the age of 12. His work was in a prosaic family business and gave no outlet for his idealism, so he threw himself into innumerable activities connected with the Church. At the same time his conduct was not perfect: he drank a little, although (perhaps because) his father was a proselytizing teetotaller. He was noisy and boisterous, and fond of taking a prominent place in company. There are many details of his rather double character, and upon all this his later obsessive doubts about his motives might be founded. There were important difficulties in his sexual life.

Progress.—In spite of the schizoid symptoms the main features of the case were neurotic, and a mildly analytic approach was adopted. This produced a wealth of material

which I have not space to mention here. This analytic material greatly increases the evidence that the origins of this case lie in the past, although the breakdown was precipitated by war conditions. The patient is now very much better.

Case IV: A Schizoid State

A man aged 24, who had previously followed the sea, joined the Merchant Navy Reserve at the outbreak of war. He took a gunnery course, but when he should have gone to his first ship he developed an acute panic. Admitted to hospital seven weeks later, he was in a state of great anxiety, and hardly able to get his words out. He was afraid of everything, and was agitated and unable to concentrate; he complained of trembling, sweating, and noises in the ears; his sleep was poor; he threatened to commit suicide, and had made an attempt at home by taking aspirin tablets. He expressed quite disordered thoughts about what might happen to him in the future: he might be sent to gaol and starved; he might be put up against a wall and shot.

Previous History.—His people came to this country from Austrian-occupied Poland before the last war. Then and afterwards the family were ostracized by the neighbours, who regarded them as Germans, and the children were confined to the house most of the time. When the patient did go out he addressed the other children in Polish and was laughed at. When he went to school he was avoided, teased, or bullied by the other children, who still regarded him as a German. He was never happy in his own home, as his father had many rows with him and made him feel he was unwanted. Several times he ran away to his grandparents and was finally allowed to stay with them. Returning to his own home when 14, he was so unhappy that he went to sea. At 18 he took a sudden panic for no apparent reason while on board ship, but worked until it returned home. He felt afraid and unable to return to sea after that, and never did. He was not actually incapacitated, but was unemployed for the next four years. His time was not wasted, as he took technical courses, painted, and read much serious literature. Mild ideas of reference appeared—that he was being discriminated against in employment because of his foreign name and that people would think him lazy. Two years ago he obtained a part-time job worth £1 a week, and was content to remain at this. He was discharged at the onset of war, and joined the Merchant Navy Reserve because he was afraid of joining the Army. There were recent sexual difficulties.

Progress.—The patient is still in hospital and has improved very slowly, although he has been removed from the Merchant Navy Reserve for medical reasons. He finds it difficult to believe that this is so and that "they will not come for him again." The anxiety has diminished and the more disordered thoughts are absent.

Case V: Manic-depressive Depression

A woman aged 38 was evacuated to Elgin on September 1, 1939, in the official scheme. She was accompanied by six of her eight children. She became somewhat depressed, spent much time reading evangelistic books, and slept poorly. She worried about how her husband and her two eldest children would manage at home and about reports of air raids over Edinburgh. After a fortnight she felt so unsettled that she returned home, bringing the children with her. She became more depressed and sleepless, and thought every little noise at night was an air raid warning. She had difficulty in concentrating, was unable to do her housework, was at times agitated, and blamed herself for doing wrong and for religious failings. She expressed suicidal ideas, locked herself in the bathroom, and attempted to jump from the window twenty feet above the ground.

Previous History.—A sister had had a "nervous breakdown." The patient had always had a typical cyclothymic disposition. After having diphtheria at 19, she suffered from sleeplessness for some time, but there were no other symptoms then. She has had eight children in her fifteen years of marriage; the last was born in July, 1939, and was weaned just before her admission in October. Throughout

her married life the patient was constantly occupied with her household and family duties and there was always a child at the infant stage to disturb her nights. She had no time for recreation. Her mother had died in childbirth at 38—the patient's present age—and she has never adapted herself to this bereavement. For nine months before the war the patient was worried by rumours of conflict, feared for her children, and constantly asked her husband if he was sure there was not going to be a war. She was irritable, but the depression did not develop until she was evacuated.

Progress.—Rest in hospital, simple explanation and reassurance, evacuation of three of the children again, and reference to the birth control clinic led in two months to recovery, which has been maintained.

Summary and Conclusions

Cases of civilians are reported in which the first incapacitating illness followed acute circumstances associated with the war. Such cases are not common in the present stage of the war, in which the civilian population has not suffered attacks from the enemy. Only about seven such cases have been observed at the Jordanburn Nerve Hospital, and all began in the first two months of hostilities—mostly in September.

Panic or fear was a prominent symptom in most of the cases, but several different psychiatric reaction types were seen. The reaction was as often psychotic as neurotic, and mixed types were observed.

Five cases have been reported in detail to show that in every instance the illness was very much predisposed to. Many of the patients showed the reactivation of difficulties in the last war described by Culpin (1940), although in some cases of this series these difficulties were in childhood. All the patients had abnormal—even grossly abnormal—previous personalities. Many factors in their personal lives helped to predispose to the illnesses. Such loaded personalities have difficulty in readjusting so long as war lasts. Of these seven patients, one, suffering from an acute anxiety state without obvious psychotic symptoms but with complete inability to accept reassurance, committed suicide; two are improving but are still in hospital; three have returned to work but still have some symptoms; and only one has made a complete recovery.

These conclusions refer to the present stage of the war and are without prejudice to the view that more numerous and more recoverable psychiatric disorders may occur at a later stage of the conflict, when the civilian population suffers more from its effects or from direct attack.

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Queen Charlotte's Maternity Hospital celebrated its bicentenary in 1939, and the report for that year marks encouraging progress. Queen Charlotte's is a hospital of which the Ministry of Health did not demand the evacuation of beds to receive casualties, and therefore the work has been carried on continuously, though with a reduced bed capacity. Work on the rebuilding of the hospital is proceeding and the main block of 196 beds is practically completed. On the outbreak of war nearly all the members of the laboratories staff left to take up duties assigned to them by the Medical Research Council in the emergency public health laboratory service in different parts of the country. The laboratories at Ravenscourt Square are being maintained jointly by the Medical Research Council and the Ministry of Health. Queen Charlotte's gives a number of statistical tables in which costs per patient are elaborately worked out. The average cost of each in-patient per week in the pre-war part of 1939 was £7 18s. 7d., and the average total cost of each patient was £14 3s. 11d., the average stay being 12½ days.