P. B. Adamson

authorised, so that they could be properly staffed, thus relieving S.S.A.F.A. sisters of a multitude of routine tasks in them to concentrate on their proper function of visiting families in their homes. The number of school children also was so large that it was impossible for families’ medical officers to keep pace with the statutory inspections, nor were there any satisfactory facilities for handicapped children.

SUMMARY

Emphasis on medical care is now forward and medical officers there, both regimental and families’, have at their disposal overseas, firstly, trained ancillary helpers such as the area hygiene assistant and S.S.A.F.A. sister, secondly, the knowledge and thirdly, the drugs to control the majority of preventable disease at source.

With the speed of air transportation, formations leaving the U.K. for operational areas cannot expect completed camp sites on arrival. They must be prepared to do more to help themselves and have with them sufficient trained regimental sanitary and water duty personnel on arrival.

Air transportation brings very much to the fore the problem of acclimatisation of troops arriving in the heat of summer and that of the importance of preliminary briefing of families in the problems of tropical hygiene.

Air transportation has revolutionised casualty evacuation. Helicopters now work direct from R.A.P. to base hospital without any intermediate link, cutting down in Cyprus, for instance, an agonising journey of six hours along a mountain road to less than one hour by air. In addition the vast majority of “casevacs” now go by air to the U.K.

If the Army medical services are to run the equivalent of a National Health service and school health service abroad, then the teaching on these subjects must be introduced into service training of medical officers at all levels at home.

REFERENCES


GERIATRICS IN THE ARMY

REPORT OF A CASE

BY

P. B. ADAMSON, M.D. (Lond.)

It is still uncommon to be able to submit a fairly complete medical report on a centenarian; it is rare to be able to do so in the case of a professional soldier who, in the normal course of duty, runs greater risks to life than does a civilian. Probably the earliest recorded instance of a soldier reaching a hundred years of age is that of Nestor, who took part in the famous Trojan War. Coming down to more recent times, a case is presented here for its historical and medical interest.
GERIATRICS IN THE ARMY

BIOGRAPHICAL DETAILS

The patient was born in Ross-shire, Scotland, on 25th November, 1852, and becoming a sailor at fourteen years of age, he served in a windjammer for five years. He enlisted in the British Army when nineteen years old and, after completion of his military training, he sailed with the Gordon Highlanders in 1874 for Natal. Later on he transferred to the Army Service Corps.

He was in action at Rorke's Drift (1879) and in the battle of Ulundi, the Anglo-Boer War of 1880-1, the Mashonaland campaign of 1896 and the South African War of 1899. In 1914 he re-enlisted for training recruits locally, but was too old to go overseas on active service.

On his final retirement from military activities he lived in Durban—a place to which he had been posted initially on his first arrival in South Africa eighty years previously. He still took a keen interest in military gatherings and social functions during his retirement. His personal requirements were simple. He apparently did not smoke, but he used to enjoy drinking beer regularly although not in large quantities. He was clean in his habits and very independent indeed. He remained a staunch bachelor all his life.

MEDICAL HISTORY

Apart from a suprapubic prostatectomy (the date of this operation being unknown), he apparently enjoyed complete health until quite recently. On 19th July, 1955, he fell down and fractured the neck of his left femur. At this time it was noted that his pulse was 100 per minute, a few extrasystoles were present and his blood pressure was 150/90. Air entry into both lungs was good and no crepitations were to be heard in the chest. The fracture was operated upon, a vitallium Smith-Petersen pin producing an excellent functional result within three months of his sustaining the original injury.

On 18th June, 1957, when he was 104 years old, he was admitted to hospital for a mild aphasia which improved rapidly. At that time the following investigations were done: Blood—Haemoglobin 12.1 g. per cent. P.C.V. 38 per cent. Total W.B.C. 6,000 per cu. mm. W.R. negative. Blood urea: 27 mg. per cent. Urine—N.A.D.

Radiographs showed a mild unilateral bronchopneumonia and an increase in size of the heart shadow. Porencephaly was present. This bronchopneumonia responded to chemotherapy and to physical exercises and he was discharged convalescent after one week in hospital.

On 6th August, 1957, he was admitted once more with a complaint of breathlessness. On examination his blood pressure was 130/80 mm., there were occasional extrasystoles present, and no pulse was detected in the left dorsalis pedis artery although other peripheral pulses were felt. Bronchovesicular breathing was heard at both lung bases, and both lungs showed poor over-all expansion. His prostate was enlarged, hard, and no median groove was palpable. The results of further investigations at this time were: Urine—N.A.D. Sputum—N.A.D. E.C.G.—extrasystoles only, suggestive of coronary disease but not
considered to be diagnostic of a coronary thrombosis. In view of his advanced age it was considered unjustifiable to perform many investigations on him.

He improved considerably on the broad-spectrum antibiotics, but he had a relapse with breathlessness and bilateral basal pleural effusions two weeks after his admission to hospital. Further investigations then showed the following:

21st August: Hæmoglobin 14.1 g. per cent. P.C.V. 47 per cent. Total W.B.C. 8,000 per cu. mm., neutrophils being 83 per cent. Blood urea 26 mg. per cent.


27th August: General condition continued to deteriorate slowly. Blood urea 76 mg. per cent. Electrolyte studies showed sodium ion 147, potassium ion 3.9, chloride ion 106 mEq. Alkali reserve was 26 mEq.

30th August: General condition continued to deteriorate. Blood urea 118 mg. per cent. Electrolyte studies were repeated and showed sodium ion 157, potassium ion 5.1, chloride ion 105 mEq. Alkali reserve was 28 mEq.

He died quietly on 2nd September, 1957, and an autopsy was performed thirty hours later.

AUTOPSY REPORT

External appearance

The body was that of an old European male, almost completely bald but with a long, white beard. There was slight generalised wasting only. An old suprapubic scar for a prostatectomy and a scar over the left hip for the Smith-Petersen pin was noted. A few of his own teeth were still present and appeared to be in good condition.

Internal appearance

All organs were in a good state of preservation. Lungs: small, bilateral, clear pleural effusions; acute bronchiolitis, pulmonary œdema and congestion were noted in all areas. No atheroma noted in pulmonary vessels. Heart: small, clear pericardial effusion; slight dilatation of mitral ring with slight calcification of mitral cusps; slight calcification of aortic cusps and of chordæ tendineæ; all the valves were effective; the muscle of the left ventricle was 19 mm. thick, that of the right ventricle being 6 mm. thick; an old mural thrombus was attached to the wall of the left ventricle over an infarct (about 5 mm. in length) involving the interventricular septum at the base of the heart; moderate stenosis due to atheroma was noted in the coronary arteries; slight atheromatous changes were also found in the aorta and systemic arteries, more severe in the distal portions of the vessels. Intestines: slight congestion of the caecal mucosa only. Liver: simple atrophy of both lobes, left slightly more than the right. Early nutmeg pattern present. Small hepatoma present in right lobe, about 10 mm. in length. Kidneys: bilateral severe degree of ischaemic change; the vessels were very prominent; large simple single cyst found in the cortex on the right side; the capsule stripped readily. Prostate: large, slightly calcified, nodular lateral
lobes. Median lobe moderately hypertrophied. No extension of gland outside the capsule was seen. **Bladder**: normal, no hypertrophy found. **Testes**: normal, a few simple small cysts were present in the epididymis. **Spleen**: small, fibrous and contracted. **Suprarenal**: normal. **Thyroid**: moderately large calcified nodule, about 3 cm. long, found in the left lobe. Not adherent to other structures. **Brain**: occasional very minute cysts seen in right thalamus. No evidence found of any previous cerebral damage. Pituitary gland appeared normal.

Additional comments—no osteo-arthritis noted in the spine. The Smith-Petersen pin was in good position in the head of the left femur, bony union having taken place previously. Some osteo-arthritis of the left hip joint, with slight flattening of the head of the femur, had occurred.

**HISTOLOGY REPORT**

**Brain**: thalamus contains a number of "corpora amylacea" but shows no other abnormality. **Thyroid gland**: shows fibrosis separating acini which are lined by low cuboidal epithelium and contain pale-staining colloid. An occasional large acinus is seen. In the gland, with a partial fibrous capsule, is a mass of large cells with eosinophilic cytoplasm, in places arranged in a solid acinar manner. These cells show well-marked variation in both cell and nuclear size and a considerable number of the nuclei are hyperchromatic. Mitoses are not a feature, but in view of the above this is considered to be a carcinoma rather than an adenoma. Calcific deposits are present in the fibrous tissue surrounding the tumour. **Heart**: Severe degree of myocardial hypertrophy and interstitial fibrosis. Multiple infarctions present of varying ages. Large recent infarct with organising mural thrombus present. **Gall bladder**: atrophic. **Aorta and carotid vessels**: Moderate atheromatosis. **Lungs**: Bronchiolitis and bronchopneumonia. **Kidney**: Moderate senile ischaemic changes. Severe medial degeneration of afferent vessels. **Spleen**: Congestion and fibrosis due to congestive cardiac failure. No pigment deposits found. **Liver**: Moderate passive congestion. There is a nodule of tumorous cells surrounded by compressed liver tissue and containing, peripherally, numerous thin-walled blood-vessels. The cells of this mass resemble those of the thyroid tumour and this is considered to be a secondary deposit, even though the liver is not a common site for secondary deposits of a thyroid carcinoma. **Prostate gland**: Shows hyperplasia and also an adenocarcinoma which is infiltrating lymphatics and peri-neural lymphatics. **Testes**: Atrophied with considerable increase in stromal fibrous tissue. Interstitial cells scanty but present. **Suprarenal and pancreas**: N.A.D.

**Conclusion**: Cause of death was bronchopneumonia secondary to cardiac failure following myocardial infarction.

**COMMENTS**

The previous medical history was to a great extent unknown. It was noteworthy that there was no evidence of former battle injuries or of such diseases as malaria,
schistosomiasis, trypanosomiasis or enteric fever found at autopsy, although he must have been frequently exposed to some of these diseases during his campaigning days with the army.

In general, most organs of his body were in a remarkably healthy state. It was interesting to note that he still had some of his own teeth present. In spite of the atrophy of both testes, some morphologically normal spermatozoa were being produced from residual testicular tissue. This does not mean that such spermatozoa were functional, particularly in view of the atrophy noted in the prostate, but it demonstrates that the testis may continue to function for much longer than has been thought previously.

As regards the final results of the healing of his fractured femur, the surgeon was most impressed with the state of his tissues at operation and the rapid recovery afterwards. At autopsy it was difficult, in fact, to find the surgical scar made by the incision through the skin, because healing had been so complete. The vitallium pin caused no trouble locally, allowed bony union to occur and did not interfere with full movement of that joint.

Howell (1957) mentions a type of chronic bronchitis only found in old people over eighty years of age. On first impressions, one may have considered this case to have been an example of this condition, but the histology of the lung did not confirm it at all. It was noteworthy that his cardiac condition was severe enough to produce clinical signs of cardiac failure and recurrent myocardial infarctions were demonstrable in histological sections, yet these pathological changes could not be conclusively demonstrated during life, even with the aid of E.C.G. studies.

SUMMARY

A case of a professional soldier who had taken part in several major campaigns is presented. He succeeded in living well over a hundred years and died quietly in a civilian hospital.

Biographical and medical details are provided, as well as autopsy and histology reports on his final illness.

REFERENCES

I wish to thank Dr. H. D. Tonking, Provincial Pathologist, Natal, for permission to report this case, and Lieut.-Colonel D. W. Bell, R.A.M.C., for confirmation of the histological reports.