COMMENT

On inquiry from the patient and her relatives it was established that she was very fond of watercress, which she was wont to gather from roadside ditches near her house, having once been heard to complain that "the cows had eaten it all."

A feature of the case was the entire absence of a history of the occurrence at any time of an acute febrile illness with "liver pain," such as is characteristic of the invasive (larval) stage of the disease. For this reason it is difficult to fix the time of infection, but the duration of the attacks of colic and the grossly pathological condition of the bile-duct indicate that it was not later than 1959, and as that was a very dry year, unsuitable for the development of the fluke, 1958 seems the latest time—this was the year of the outbreak previously referred to.

Acknowledgments are due to Dr. E. J. O'Keefe (Medical Officer of Health) for investigating the source of the watercress; to Mr. F. P. Forrest for permission to publish the case; to Dr. T. J. Wickham for the post-mortem report; and to Dr. R. V. Facey for his help and encouragement to publish this report.

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Constrictive Pericarditis Resulting from Dracunculosis

The presence of a guinea-worm in the coelomic cavity is rare and its presence in the body cavities other than the peritoneum has not been reported. Recently we came across a guinea-worm infestation of the thoracic cavity which had produced constrictive pericarditis.

CASE REPORT

A Hindu man aged 35 was admitted to hospital for exertional dyspnoea and progressive abdominal distension of six months' duration. He had also noticed some puffiness of the face and oedema of the feet.

On examination pulsus paradoxus was apparent on palpation. B.P. in the arm was 96/70 mm. Hg. Systemic examination revealed a greatly distended abdomen. The liver was enlarged three fingerbreadths below the costal margin. The spleen was not palpable. Marked ascites was evident. The apex beat was not palpable. Heart sounds were feeble and no murmur was heard. Eosinophilia was not detected. A radiograph of the chest showed moderate enlargement of the cardiac silhouette with fluid in the left pleural cavity. Fluoroscopy revealed feeble cardiac pulsations. Electrocardiogram: low-voltage and flat T waves in all leads. The venous pressure in the antecubital vein was 290 mm. of water at rest. Right heart catheterization revealed intracardiac pressures within normal limits. No abnormal shunts or passages were discovered.

A diagnosis of constrictive pericarditis, probably of tuberculous origin, was made. The patient was treated with bed rest, diuretics, low-sodium diet, and anti-tuberculosis drugs for two months prior to surgery.

Operation.—On September 23, 1960, the heart was exposed through a T-shaped median sternotomy, Holman-type incision. The pericardium was much thickened and showed calcification along the left border. A small abscess cavity was found in the region of the transverse sinus. As the contents of this abscess cavity were being evacuated a

coiled-up worm buried in the necrotic granulation tissue was detected and removed almost intact. The entire abscess cavity was then excised and the wound was closed with a drain.

The patient made an uneventful recovery. Further inquiry into the past history revealed that the patient had had a guinea-worm abscess of the leg a year before admission.

At follow-up seven months after operation the patient showed remarkable improvement in his tolerance for physical exertion. The neck-vein congestion was greatly diminished. The liver was not palpable. No ascites or oedema was seen. The venous pressure in the antecubital vein was 160 mm. water at rest.

The post-operative radiograph of the chest showed significant diminution in the size of the cardiac shadow and clear lung fields. Fluoroscopy revealed good cardiac pulsations. The E.C.G. showed improvement in voltage and T-wave changes.

Pathological Report.—The dead worm removed measured 53.5 cm. in length and 2 mm. in thickness. The tail end could be easily identified because of the characteristic hook-like bend. Head parts were not seen. Typical rhabditiform larvae with striated cuticle came out on light squeezing, revealing the identity of the worm. Sections from the pericardium showed granulation tissue infiltrated with mononuclears, neutrophils, and eosinophils. No evidence of tuberculous inflammation was seen.

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Subdural Haematomas Complicating Anticoagulant Therapy

From time to time it is worth while to report the occurrence of clinically significant bleeding in patients receiving anticoagulant therapy. It serves to re-emphasize the importance of carefully controlled patient observation and therapeutic discrimination, which are essential to the administration of these potentially dangerous drugs.

Although more accurate methods for the measurement of the various blood-coagulation factors now exist (Owren, 1959), the increasing tendency to treat patients on an ambulatory basis (Cronhelm, 1961) may be expected to increase the number developing haemorrhagic complications. This may be partly explained by the occurrence of bleeding at levels of prothrombin activity within or above what is thought to be a desirable therapeutic range, and because in the final analysis accurate control depends upon the intelligent understanding and co-operation of the patient.

Intracranial haemorrhage, though less frequent than other bleeding manifestations, is more often fatal, and more hazardous from a prognostic point of view because of the irreversible nature of the changes produced in the central nervous system. Subdural haematomas are the least common form of intracranial haemorrhage, but are the most amenable to surgical treatment and pathological reversibility.

CASE 1

A 52-year-old woman was discharged from hospital on digitalis, antidiuretics, and dicoumarol for the treatment

of essential pulmonary hypertension. Prothrombin activity was measured by the "prothrombin and proconvertin" method (therapeutic range 10-20%). Four months later, and one week before admission to this clinic, haematuria and bleeding from the gums and into the subcutaneous tissues occurred. She did not report this complication and several days later a severe generalized headache began. Progressive lethargy, confusion, and slurred speech followed.

On admission the patient was stuporous, with widespread subcutaneous and petechial haemorrhages. There was active bleeding from the nose, gums, and genitalia. The B.P. was 115/60. The left pupil was dilated. There was a right hemiparesis and an extensor plantar response on the right. The patient was thought to have intracerebral bleeding, and after blood transfusions and massive vitamin K therapy an arteriogram revealed the presence of bilateral subdural haematomas. These were removed. Both were fresh, the one on the right covering most of the hemisphere and measuring up to 2 cm. in thickness. That on the left was 0.5 cm. thick and covered the temporo-parietal region.

The P. and P. on admission was less than 5% and the arteriographic and surgical procedures were begun when it had been raised to 34% with a coagulation time of five minutes.

Post-operatively there was a sensory and motor aphasia which gradually cleared over a period of one month.

CASE 2

A 73-year-old woman was admitted to hospital and treated for rheumatic heart disease and congestive failure with lanatoside C ("cedilanid") and dicoumarol. Control was maintained by the prothrombin (Quick) index (therapeutic range 50-60%). Two weeks after starting treatment she complained of sudden severe right-sided headache. She vomited and became apathetic and confused. After a lumbar puncture, which revealed microscopical bleeding (231 fresh red cells and 231 crenated red cells per c.mm.), she steadily improved. Ten days later, however, she again became confused, with slurred speech and a progressively deepening stupor. The Quick index was 17%, and after blood transfusions and vitamin K therapy it was increased to 85%, when an arteriogram was carried out for suspected intracerebral bleeding. A right-sided subdural haematoma, 1 cm. thick, was found, and she was referred to this clinic for treatment one month after her admission to hospital. The haematoma covered most of the right hemisphere and both macroscopically and microscopically was thought to be from one to two weeks old.

She was slightly disoriented post-operatively, and eight days later a sudden loss of consciousness necessitated the removal of a recurrent haematoma. She slowly improved after its evacuation. The Q.I. between operations had been maintained at levels above the therapeutic range.

COMMENTS

The type and incidence of intracranial bleeding complicating anticoagulant therapy is difficult to determine statistically owing to clinical recovery in the absence of investigative studies or lack of necropsy information. Minor degrees of intracerebral bleeding are probably not uncommon. Wells and Urrea (1960) analysed the records of 600 patients and found that 23 had developed 26 major cerebrovascular accidents while on anticoagulant therapy, with a mortality rate of 35%. Fourteen of the patients, including five cases of subdural haematoma, had bled.

From the few reports in the literature concerning the formation of complicating subdural haematomas (Shlevin and Lederer, 1944; Olwin and Paul, 1957; Nathanson *et al.*, 1958; Barron and Fergusson, 1959; Eisenberg, 1959; Wells and Urrea, 1960) it is apparent that they occur

irrespective of the anticoagulant drug or control method used, commonly in hypertensive patients, and most significantly when the prothrombin time is below, within, or above the accepted therapeutic range of the drug being used. The prognosis is poor, since in 7 of the 10 reported cases the patients have died. The operative mortality has been 50% and the non-operative mortality 100%.

Although trauma has not been noted in any of the reported cases, its existence as an aetiological factor is difficult to determine. It has been suggested that such patients may be more liable to develop subdural haematomas from degrees of trauma which would ordinarily be regarded as trivial. In the present cases both patients were normotensive, the prothrombin level was well below the desirable therapeutic range, and trauma was not a factor. Trauma could be definitely excluded in Case 2 because the patient was in a hospital bed when bleeding occurred.

As the compressive effects of the haematoma may be reversed by early operative intervention, the importance of careful investigation of all patients on anticoagulant therapy who develop symptoms and signs referable to the central nervous system is evident. Rapid elevation of the prothrombin level to normal, or above, will permit the arteriographic investigation of suspected clinical cases.

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The latest in the series of British Standard glossaries, of which there are now more than 60 covering most of the major industrial activities, is a 126-page volume of terms used in nuclear science. This new glossary (B.S. 3455) provides a standard technical language for the nuclear technologist and for many others in science and industry who have an interest in nuclear energy. Its preparation was entrusted to a committee which included representatives of the United Kingdom Atomic Energy Authority, the Atomic Scientists' Association, the Royal Society, the National Physical Laboratory, the World Power Conference, the British Institute of Radiology, the Hospital Physicists' Association, the Scientific Instrument Manufacturers' Association, the University of Cambridge, and others. The fields covered by the glossary are nuclear physics, nuclear chemistry, reactor theory and engineering, metallurgy, isotope separation and nuclear emulsion techniques, radiology, and instrumentation. Wherever possible the definitions of radiological terms have been based on those of the International Commission on Radiological Units and Measurement. Special care has been taken to avoid unnecessary differences between British definitions and those in the American Standard glossary of terms used in nuclear science and technology (ASA N1. 1-1957). Copies of *Glossary of Terms Used in Nuclear Science* may be obtained from the British Standards Institution, Sales Branch, 2 Park Street, London W.1 (price £1 10s. each, postage extra to non-subscribers).