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PRIMARY INTRACEREBRAL HAEMORRHAGE COMPLICATED BY CEREBRAL ABSCESS: CASE REPORT

E. O. Amayo, MBChB, MMed, Senior Lecturer, T. O. Kwasa, BSc, MBChB, MMed, Senior Lecturer, Department of Medicine, C. K. Musau, MBChB, MMed, Lecturer, Department of Surgery, College of Health Sciences, University of Nairobi, P.O. Box 19676, Nairobi, N. Mugo, MBChB, MMed, Consultant Physician, Cardiologist and J. Wambani, MBChB, MMed, Consultant Radiologist, Kenyatta National Hospital, P.O. Box 20723, Nairobi, Kenya.

Request for reprints to: Dr. E. O. Amayo, Department of Medicine, College of Health Sciences, University of Nairobi, P.O. Box 19676, Nairobi.

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E. O. AMAYO, T. O. KWASA, C. K. MUSAU, N. MUGO and J. WAMBANI

SUMMARY

A case of primary intracerebral haemorrhage complicated by cerebral abscess is presented with a review of the literature.

INTRODUCTION

Brain abscess complicating cerebral haematoma is very rare. They are, frequently associated with penetrating trauma or surgical procedures, and are uncommon as a metastatic focus from bacteraemia(1-3). However, abscess formation without surgery is exceptional. Kurihara *et al*(3) found only five cases of brain abscess following an intracerebral haemorrhage in literature.

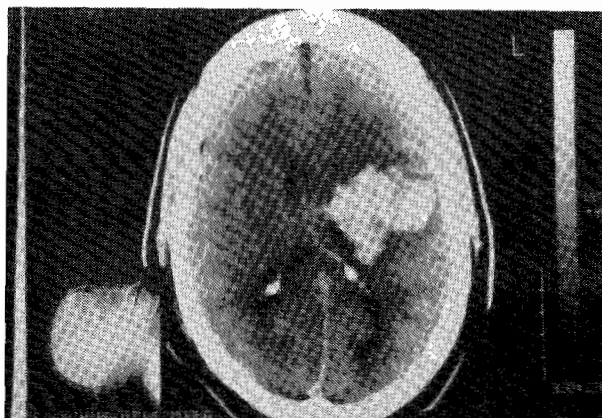
We represent a case of primary intracerebral haemorrhage complicated by cerebral abscess.

CASE REPORT

Case report: PM was a 66-year old male known hypertensive on erratic treatment who presented with the sudden onset of right-side body weakness. There was no previous history of transient ischaemic attack (TIA), cardiac disease or stroke. The family history was unremarkable. On examination he was found to be febrile, 39°C, and in coma, Glasgow coma scale 5. He had a dense right-sided haemiplegia with muscle power grade 0. He had non-fluent dysphasia. The deep tendon reflexes were brisk on the right. Both carotid pulsations were normal and there were no carotid bruits. ENT and dental examinations were all normal.

Figure 1

CT showing left intracerebral haemorrhage

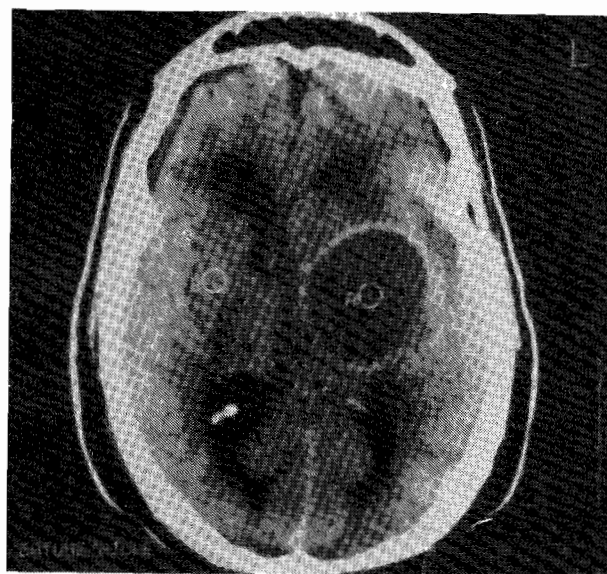


In the respiratory system he had features of left-sided basal consolidation. The blood pressure was 190/120mmHg with no signs of cardiac failure. He was started on antihypertensives and antibiotics for the chest infection. CT scan of the head showed a left-sided intracerebral haemorrhage with mass effect (Figure 1). He made a steady recovery and the fever settled.

He was commenced on physiotherapy. A month later he was noticed to have deteriorated. His level of consciousness dropped. A repeat CT scan revealed a brain abscess with ring enhancement and mass effect (Figure 2). He was started on intravenous ceftriaxone and metronidazole with little improvement. He was

Figure 2

CT scan showing left cerebral abscess



taken to theatre where the abscess was drained via a burr hole. Serosanguineous fluid was obtained which on gram stain showed pus cells without any organisms. Culture of the aspirate was negative. Post-operatively he did well and the following day he was fully conscious but remained aphasic. He was allowed home to continue physiotherapy.

DISCUSSION

Brain abscess complicating cerebral haematoma is rare. Though frequently associated with penetrating trauma or surgical procedures, they are uncommon as a metastatic focus from bacteraemia(1-3). Haematoma may become infected either by direct inoculation or by haematogenous spread from a distant focus of infection(4,5). The haematoma acts as a "locus minoris resistentiae" during bacteraemia. Abscess formation may develop after surgery of an intracerebral haemorrhage but abscess formation without surgery is exceptional. Kurihara *et al*(3) reviewing the literature found only five cases of brain abscess following an intracerebral haemorrhage.

Infection within the thorax is the most common source of metastatic brain abscesses, especially in the aged(1,2). Our patient (PM), had pneumonia which was the probable source of metastatic spread.

Other possible causes of abscess formation include mycotic aneurysms. Mycotic aneurysms are ascribed to embolic occlusion of the vasa vasorum, bacterial invasion of the vessel wall, or damage to the arterial wall from immune complex deposition(6). They are usually due to infective endocarditis and are situated peripherally. In the absence of infective endocarditis the commonest causes are pneumonia and osteomyelitis. Rupture of a mycotic aneurysm may lead to haematoma which becomes secondarily infected.

The commonest organisms cultured from the abscess are *Streptococci* although *Staphylococci* and *Pneumococci* have been isolated(2). In 15-25% of brain abscesses the primary source of infection is not found and therefore designated as cryptogenic(2). Rare causes of abscess include dental care and oesophageal sclerotherapy.

The treatment of choice for these patients remains aspiration and medical therapy(1,2). However, some cases have responded to medical therapy alone. Physicians should be aware of the risk of abscess formation in patients with intracerebral haematomas and should always be considered in patients who deteriorate.

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