Anaesthetic management of Caesarean section in a patient with active recurrent genital herpes and AIDS-related dementia

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Summary
We report the anaesthetic management of a pregnant patient with multiple manifestations of HIV infection who underwent Caesarean section. A 30-yr-old, HIV-positive, Haitian woman presented with acute psychosis at 28 weeks’ gestation. A diagnosis of HIV dementia complex was made and haloperidol therapy was started. Five days after admission the patient was found to be in labour and tocolytic therapy with terbutaline was commenced. A vaginal lesion compatible with herpes simplex virus was observed which was treated with acyclovir. After 3 days of tocolytic therapy there were no further signs of preterm labour. Two weeks later, at 30 weeks’ gestation, the patient’s membranes ruptured spontaneously. The herpes labialis lesion was still present and urgent Caesarean section was begun using subarachnoid 0.75 % bupivacaine 1.5 ml. The patient had no intraoperative problems and a 1700-g healthy male child was delivered. (Br. J. Anaesth. 1995; 75: 639–641)

Key words
Anaesthesia, obstetric. Complications, AIDS.

Human immunodeficiency virus (HIV) disease and acquired immunodeficiency syndrome (AIDS) are occurring with increasing frequency in the obstetric population [1]. A nationwide HIV survey in the USA estimated that 1.5 per 1000 parturients were infected with HIV [2]. Although the course of pregnancy does not appear to be influenced by HIV infection, pregnancy, with its suppression of cell-mediated immunity, may facilitate clinical illness in the HIV-positive patient [3]. Many of the infections seen in these patients and drugs used to treat them have implications for the anaesthetist. We report the anaesthetic management of a pregnant patient with multiple manifestations of HIV infection who underwent Caesarean section.

Case report
A 30-yr-old Haitian woman, at 28 weeks’ gestation, was admitted to the psychiatric unit of our institution with diagnosis of acute psychosis. Her past medical history revealed she was HIV positive but had not previously demonstrated symptoms of AIDS. At the time of admission she was described as alert but disoriented, and experiencing auditory hallucinations. According to the initial psychiatric assessment, she “showed no insight and had severely impaired judgement”. Physical and neurological examinations on admission were normal. Analysis of CSF and CT scan of the head were within normal limits. A diagnosis of HIV dementia complex was made. Treatment with haloperidol was started and the patient was observed in the psychiatric unit. Although there are reports of limb malformations after maternal use of haloperidol during the first trimester of pregnancy, there are no well controlled studies in pregnant women. Although the patient became less combative after initiation of therapy, her mental status varied between orientation and total confusion.

Five days after admission the patient complained of abdominal pain and she was found to be in labour. She was transferred immediately to the obstetric unit where tocolytic therapy was started with terbutaline. At that time, a vaginal lesion compatible with herpes simplex virus (HSV) was observed. Culture of this lesion was positive for HSV and she admitted to having suffered from previous herpes infections. Therapy with acyclovir was started. After 3 days of tocolytic therapy, with no further signs of preterm labour, the patient was returned to the psychiatric unit. Two days later the patient was noted to be alert and oriented. An anaesthetist performed a preoperative assessment assisted by the psychiatrist, and explained the anaesthetic options for labour and Caesarean section. At that time the patient was able to discuss coherently the plans for her anaesthetic and understand both the risks and benefits of regional anaesthesia.

Two weeks after admission, at 30 weeks’ gestation, the patient’s membranes ruptured spontaneously while she was in the psychiatric unit. She was transferred back to the obstetric unit where she was found to be disoriented and was reported to have recently eaten a full meal. The herpes labialis lesion was still present and preparation for urgent Caesarean section was begun. Physical examination was normal. Regional anaesthesia using subarachnoid injection of 0.75 % bupivacaine 1.5 ml was uneventful, producing analgesia to the level of T4,
and Caesarean section was performed. Despite her altered mental state, the patient had no intraoperative problems under regional anaesthesia. A 1700-g male child with Apgar scores of 9 and 9 at 1 and 5 min was delivered and transferred to the neonatal ICU.

Discussion

AIDS and HIV-related disease have become leading causes of death in the USA among women of reproductive age [4]. Data obtained from the Centers for Disease Control indicate that CNS complications account for 7.2% of all AIDS-related diseases [5].

Some of these neurological disorders can occur at an early stage of HIV infection and in the absence of any constitutional symptoms. The dementia which may be associated with AIDS has been termed HIV-1 encephalopathy (HIVE), HIV-related dementia, AIDS encephalopathy and HIV dementia complex. Clinical manifestations of dementia are evident in up to 66% of patients with AIDS at the time of death, and the majority of AIDS patients exhibit histological evidence of subacute encephalitis. The typical presentation of HIV dementia complex includes memory loss, apathy and cognitive slowing. This dementia may progress rapidly with advancing signs, including psychomotor retardation and hyperactive reflexes [6].

There is controversy regarding the anaesthetic management of these patients. Some authors have suggested that performing extradural or spinal anaesthesia may cause central nervous system spread of the disease. Greene, in 1986, drew attention to the risk of contamination of the CNS and exacerbation of neurological disease by regional anaesthesia [7]. A recently published prospective analysis of 18 HIV-positive parturients who received regional anaesthesia concluded that regional anaesthesia may be performed in these patients without adverse sequelae [1]. Since CNS contamination by HIV has been demonstrated to occur early in the course of the disease, CNS inoculation by HIV during regional anaesthesia is unlikely to occur [8, 9]. Another study, which evaluated 96 HIV-positive parturients of whom 36 received a regional anaesthetic, found neither clinical nor immunological evidence of exacerbation of neurological disease in this population and concluded that regional anaesthesia is an appropriate choice in the HIV-positive parturient [10]. However, the use of spinal or extradural anaesthesia in the HIV-positive patient with active neurological disease remains controversial.

In the event of a post-dural puncture headache in an HIV positive patient, there is controversy on the safety of performing extradural blood patch [11]. Several publications have recently discussed this problem [9, 12, 13]. Two reports, in a total of seven patients, have demonstrated absence of an increase in CNS dysfunction or other complications after blood patch in HIV-positive patients [9, 12]. Newman and colleagues, however, recently proposed that blood patch should be contraindicated in the HIV-positive patient [14]. Extradural saline infusion or blood patch with heterologous HIV negative blood have been suggested as alternatives [9, 13].

This patient also presented with recurrent genital HSV infection. A major area of concern when treating a parturient with HSV infection is prevention of neonatal contamination. To prevent this, Caesarean delivery is recommended [15]. Theoretically, regional anaesthesia is not contraindicated in recurrent outbreaks of HSV infection [16–18]. However, there have been no studies on the safety of regional anaesthesia in parturients with primary herpes infection.

In summary, we have reported a case where regional anaesthesia was used in a patient with HIV, genital HSV infection and dementia. According to recent literature, neither active recurrent genital herpes nor positive HIV status are contraindications to regional anaesthesia. Further studies with larger numbers of patients are required to determine the safest method of providing anaesthesia for the HIV-infected parturient.

References

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