Development of cutaneous gangrene during continuous peripheral infusion of vasopressin

J R ANDERSON, G W JOHNSTON

Abstract

Five patients given vasopressin by infusion to reduce portal hypertension developed signs of cutaneous gangrene 18-24 hours after the start of the infusion. Four patients were treated by application of local dressings; in three cases the lesions healed, but the fourth patient died from variceal haemorrhage. The remaining patient required split skin grafting but died 48 hours after operation.

The mechanism of this effect of vasopressin is not clear, but if local blanching of the skin is noted during infusion the catheter should be flushed immediately with a vasodilator in an effort to counteract the drug's vasoconstrictor effect.

Introduction

Vasopressin reduces portal venous pressure and is consequently a useful pharmacological adjunct in the management of patients with bleeding oesophageal varices. This effect is mediated by vasoconstriction of the splanchnic circulation, the drug being most active at the arteriolar and precapillary sphincter levels. Pallor and abdominal colic due to increased intestinal motility are common side effects. Myocardial infarction and subsequent death has been reported after injection of vasopressin, and the drug should be used with caution in patients with coronary insufficiency.1 There have been few reports of cutaneous gangrene occurring after infusion of vasopressin.2-4 We report on five patients who presented with haematemesis from oesophageal varices and who developed cutaneous gangrene after peripheral infusion of vasopressin.

Case reports

The table summarises the details of the five patients. Two patients (cases 2 and 5) had maturity onset diabetes, which was well controlled by oral hypoglycaemic agents. The patient in case 2 also had hypertension.

Cases 1, 2, and 3—The patient in case 1 developed a 5 x 2 cm area of cutaneous necrosis immediately proximal to the site of the intravenous catheter after a 24 hour infusion of vasopressin at a dose of 20 units/hour. There was no evidence of subcutaneous extravasation of the infusate. Local dressings were applied, and the area had completely healed without surgery four weeks later. Two other patients (cases 2 and 3) developed similar sized lesions after 24 hours of infusion of vasopressin in the same dose. The lesions had healed by secondary intention within six weeks.

Case 4—The patient was an obese woman with poor venous access. Vasopressin was administered via a catheter in the long saphenous vein of the left leg (20 units/hour). After 24 hours an extensive mottled area extending along the line of the long saphenous vein to above the knee was noted. The area became gangrenous and was managed initially with local dressings but required split skin grafting 41 days later. She died 48 hours postoperatively from a massive pulmonary embolus.

Case 5—The patient received an infusion of vasopressin (20 units/hour) into a vein in the left antecubital fossa. After 18 hours considerable extravasation of the infusion fluid was noted and a tri-
Vertebral osteomyelitis due to coccobacilli of the HB group

MARK FARRINGTON, SUSANNAH J EYKYN, MARK WALKER, R E WARREN

Abstract
Three cases of pyogenic vertebral osteomyelitis occurred in which unusual, fastidious, Gram negative coccobacilli belonging to the "HB" group were isolated. The organisms were Haemophilus aphrophilus in case 1, intermediate between H aphrophilus and Actinobacillus actinomycetemcomitans in case 2, and Eikenella corrodens in case 3. All HB bacteria are sensitive to a wide range of antibiotics.

Introduction
Haemophilus aphrophilus, Eikenella corrodens, and Actinobacillus actinomycetemcomitans form the "HB" group of fastidious, Gram negative bacilli defined by King and Tatum. They are commensals of the mouth and pharynx in man but have been isolated (though infrequently and usually in mixed culture) from infections in various sites, especially those close to the upper respiratory tract. We report three cases of pyogenic vertebral osteomyelitis in which HB bacteria were isolated in pure growth from spinal pus and blood cultures.

Case reports
Table 1 summarises the clinical details of the three patients with vertebral osteomyelitis; further features in case 1 were worthy of note. The patient, a 59 year old woman, was admitted in February 1981. She had had sepsis following an iophendylate injection (ittressin) and continued for 20 units every three to four hours. At the end of the regimen she was afebrile but the site of intravenous injection was swollen, red, and tender. The infusion of vasopressin. When vasopressin has to be infused via a peripheral vein, however, the infusion site and catheter should be covered by a transparent sterile dressing and not bandaged in the traditional fashion. The nursing staff should inspect the site at hourly intervals, and if local blanching of the skin is noted, the infusion should be stopped. Although there is no proved antagonist to the vasocostrictor effect of vasopressin we would advocate immediate flushing of the catheter with a vasodilator. Treatment with vasopressin should be continued only if absolutely necessary and then via a central catheter.

The Committee on Safety of Medicines and the manufacturers of vasopressin have not received any reports of this complication.

References

(Accepted 7 November 1983)