Medical leeches as sources of wound infection

Leeches are used in plastic surgery to help relieve venous congestion after microsurgery: they ingest blood until satured and then detach themselves. Owing to the anticoagulant properties of the animals' saliva the puncture wound continues to bleed. We report six cases in which use of leeches was followed by wound infections due to Aeromonas hydrophila.

Patients, methods, and results

We use about 100 leeches (an average of 10 per patient) each year. During the past three years six wounds six wounds infected by A hydrophila developed in patients on whom leeches had been used; this represents an infection rate of 20%. The table summarises details of the six cases.

Comment

Whitlock et al suggested that the medicinal leech (Hirudo medicinalis) was a potential source of infection when used in plastic and reconstructive surgery because it carries A hydrophila within its gut. The leech has no proteolytic gut enzymes and relies on the bacteria to digest blood. The organism has also been isolated from the anterior and posterior suckers of leeches and from the mucous trail and water in which they are kept. A hydrophila has been implicated in three types of infection. It has been reported to be the causative organism in 2% of patients with diarrhoea, and infections may occur after injuries sustained while swimming in contaminated water and in immunocompromised patients. The organism is occasionally carried in faeces.

Although infection after the use of leeches has been reported only once previously, our findings suggest that leeches may be an important cause of wound infections. These infections are generally characterised by the onset of inflammation and suppuration over 24 hours accompanied by moderate fever and leucocytosis. The proteolytic action of the bacterium may explain its effect on muscle; in case 5 a graft of muscle was destroyed by infection. The infection responded to antibiotic treatment in all but one case, in which it settled spontaneously before sensitivities were known. Surgical drainage and debridement were used to remove necrotic material.

Despite our findings leeches will remain useful in plastic and reconstructive surgery to treat venous congestion. When wound infection occurs after their application aeromomas should be looked for carefully. All but one of the strains isolated from our patients were resistant to penicillin and ampicillin; antibiotic sensitivity tests should always be performed. To treat an aeromomas infection an antibiotic resistant to β-lactamases (for example, Augmentin) should be given orally or a cephalosporin (for example, cefuroxime or cephradine) intravenously.

Primary myelodysplastic syndrome and cancer

Myelodysplastic syndrome is a preleukaemic clonal abnormality of haematopoietic stem cells. We have looked at the occurrence of non-haematological malignancy in 138 patients with this condition, to find out whether or not they have an increased risk of developing other cancers either before or after myelodysplastic syndrome has been diagnosed.

Methods and results

Between October 1982 and May 1986 myelodysplastic syndrome (defined by conventional criteria) was diagnosed in 138 patients. No patient with coexistent...