Treatment of shingles and post-herpetic neuralgia

Relieves shingles but does not prevent neuralgia

The annual incidence of herpes zoster in the general population ranges from an estimated 0·8 to 4·8 per thousand. Nevertheless, this increases sharply with age—from two to three cases per 1000 in early adult life to five in the sixth decade, six to seven in the seventh and eighth decades, and 10·1 in those aged 80 and over—corresponding to the natural decline in cell-mediated immunity.1,2 Herpes zoster occurs spontaneously in normal people, most cases being self-limiting and resolving completely.3 The pain may be severe but is usually transitory; but increasing age increases both the duration and severity of herpes zoster neuralgia.1 Complications occur in 15-20% of cases, the most common being post-herpetic neuralgia in 9-14%.4 This is pain persisting or occurring at the site of shingles over 30 days after the onset of the acute infection.5,6 Its frequency and severity increase with age; it occurs in 16% of patients under 60 and 47% of those over 60.7 In one study no fewer than three quarters of patients over 70 had post-herpetic neuralgia, and one year after the acute infection it persisted in 42% of those aged under 20 and about half of those over 70.7 Herpes zoster of the eye is a complication in 2% of cases, being associated with a high rate of inflammatory and neuropathic ocular complications in half to three quarters of instances; such complications, especially keratitis and uveitis, may become chronic, sometimes causing loss of vision.8

The treatment of acute herpes zoster aims at reducing the upset caused by the acute infection as well as preventing complications, especially post-herpetic neuralgia. The results of studies on the efficacy of topical idoxuridine in dimethyl sulphoxide in uncomplicated herpes zoster are difficult to assess because the control groups were not always closely matched.9 In one study 40% idoxuridine applied continuously to cover the whole of the dermatome relieved the pain;10 in another study it had no effect on the pain, but the inflammatory response was shortened.10 Neither healing nor pain were altered in thoracic herpes zoster whereas both were greatly improved in trigeminal infection.11

Hence questionable efficacy as well as the side effects and the cost limit the usefulness of idoxuridine. In immunocompetent patients, on the other hand, herpes zoster may be severe enough to warrant antiviral treatment, particularly in the elderly. Acyclovir has largely replaced idoxuridine and older antiviral agents because of its low toxicity and ease of administration.12 Oral acyclovir given in high dosage (800 mg five times daily for seven days) early in the illness modifies the rash and reduces pain.13 It does not, however, diminish the likelihood of neuralgia, either by itself14 or with prednisolone,15 though it will lessen the more common ocular complications, including keratitis and uveitis.14 Treatment is expensive and thus can be considered only in patients presenting with acutely painful shingles within 48 hours of the onset of the rash, immunocompromised patients, and those with herpes zoster of the eye.

Multiple and repeated sympathetic and somatic nerve blocks relieve the pain of acute shingles and are valuable in preventing subsequent neuralgia. Early treatment of acute shingles at a pain clinic by sympathetic blockage and infiltration of somatic nerve endings with local anaesthetics has been suggested to prevent the development of post-herpetic neuralgia,17,18 but in view of the frequency of the condition this can be offered only to those at greatest risk, to the elderly, or to immunocompromised patients with severe acute infection.

Corticosteroids are commonly used to prevent the development of neuralgia despite conflicting results of several studies.19,20 Further research is needed before this treatment can be recommended, given its immunosuppressive effects and potential for serious complications. In a small, poorly controlled study amantadine given twice daily to patients with acute herpes zoster had no effect on the acute illness.
but reduced the proportion of patients with prolonged post-herpetic neuralgia. Many other reports have dealt with various treatments, but these all need evaluating by controlled studies. Clinical experience suggests that systemic analgesics, either non-steroidal anti-inflammatory drugs or an opioid drug, may moderate the acute pain in herpes zoster, but evaluations of their efficacy have not been reported. Conventional analgesics are ineffective in managing the neurogenic pain, and: the most efficacious treatment is probably prolonged treatment with anticonvulsants and tricyclic agents. Baclofen may have a therapeutic role in controlling the pain, and an epidural injection of steroids is efficacious to the extent that it may be the best treatment for chronic intractable neuralgia when steroids are not contraindicated. Acupuncture and transcutaneous stimulation are other possibly effective adjuvant treatments. Finally, preliminary results suggest that topical capsaicin, a neuropeptide active agent, may have an important therapeutic role in post-herpetic neuralgia.

Principal in General Practice, Belton, Nr Loughborough, Leicestershire LE12 9UJ

JACQUELINE V JOLLEYS

Radioactive patients

Patients given radioactive substances represent a small risk to others

Patients given radioactive substances become sources of radioactivity and present a hazard to those with whom they come into contact. Most patients given radioactive substances present only a small risk to others, but guidance needs to be followed carefully to ensure that the risk is kept to a minimum — particularly in the case of those given radiolabelled iodine (iodine-131) therapeutically.

Radiotherapy with sealed radioactive sources is carried out in designated centres on inpatients under controlled conditions of isolation, and the patients are not discharged until the treatment has been completed and the sources have been removed. On the other hand, unsealed radioactive sources are used more commonly in more hospitals, for diagnosis as well as for treatment, and in outpatients as well as inpatients. These procedures result in patients becoming mobile sources of radiation, presenting two distinct types of hazard. Firstly, radiation is emitted from the patient, so that members of the public, porters, nurses, and other hospital staff are exposed. Secondly, specimens of the patient’s tissue and body fluids such as blood and urine may become radioactive, presenting a risk to family members and other people at home and to people in hospital wards, operating theatres, and the mortuary.

The doses of radioactivity used in diagnostic tests are specified by the Administration of Radioactive Substances Advisory Committee, which issues the licence necessary for consultants to give radioactive substances to patients. Doses exceeding the specified values are given only in special circumstances. Most unsealed radioactivity used diagnostically is in the form of a radiopharmaceutical containing 99mTc, and its physical half life of six hours means that the radiation hazard is short lived. Special precautions may be necessary only when prolonged close contact with another subject is unavoidable or when there is a risk of contamination. The risk of close contact is greatest when a patient is caring for an infant at home. It may be identified by questioning the patient and minimised by issuing explicit instructions. The risk of contamination will be greatly reduced by following simple principles of hygiene and by adopting the protective measures routinely used for handling biological material.

By far the greatest hazard comes from giving iodine-131 therapeutically. Radioiodide is secreted in body fluids such as sweat and saliva, and more stringent precautions must be taken against both contamination and close contact. Conventional doses for treating thyrotoxicosis are normally given to outpatients, but the higher doses given for thyroid carcinoma mean that patients have to remain in hospital under conditions of isolation similar to those that apply to treatments from sealed sources. If radioactivity retained by the patient when leaving hospital exceeds certain defined amounts then the method of transport will be restricted and an instruction card must be issued to minimise the dose to others, particularly young children.

Statutory control is provided by the Ionising Radiations Regulations 1985, and their interpretation for clinical appli-