

patients produces a clinically significant reduction in systolic blood pressure. Simple dietary advice on salt intake, similar to that currently recommended for diabetic patients, therefore appears to be appropriate for type II diabetic hypertensives.

We are grateful to Ciba (Horsham) for supplies of Slow Sodium and placebo.

APPENDIX

Summary of dietary advice given to patients to achieve sodium restriction

Patients were instructed to avoid:

- (a) Adding table salt
- (b) Adding salt in cooking
- (c) Salted meats and smoked fish
- (d) Tinned foods—in particular tinned meats, vegetables, fish, and tinned and packeted soups
- (e) Salted cheeses
- (f) Oxo, Bovril, Marmite, and Bisto
- (g) Bottled sauces and savoury snacks, including crisps and peanuts

Controls were instructed to continue with usual eating habits, and no advice was given to either group with regard to carbohydrate, fat, or protein intake.

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Malignant fibrous histiocytoma: a new complication of chronic venous ulceration

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We report three cases of malignant fibrous histiocytoma as a complication of chronic venous ulceration. This highly malignant sarcoma has not previously been reported in this condition.

Case reports

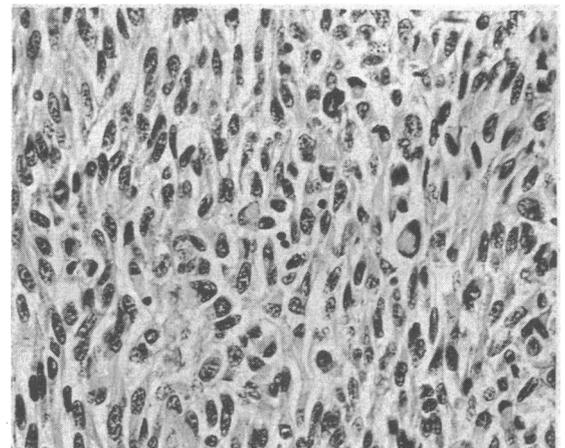
Case 1—A 77 year old woman presented in 1981 with an ulcer over the left medial malleolus. The ulcer had been present for six years but had increased in size over the previous 12 months. On examination she had extensive bilateral varicose veins. The pedal pulses were normal. The ulcer had a sloughy base and measured 10 cm by 7.5 cm, and the edge was slightly thickened. A biopsy specimen showed the histological features of malignant fibrous histiocytoma (see below). Her leg was amputated below the knee. She made an excellent recovery and used a prosthesis. There was no subsequent evidence of any metastasis.

Case 2—An 80 year old woman presented in 1983 with an ulcerated mass over the right medial malleolus. She had a history of chronic venous ulceration of the right leg dating back to a pregnancy in 1931. Examination showed a fungating tumour over the right medial malleolus surrounded by numerous scars from healed ulcers. Histological examination showed malignant fibrous histiocytoma (see below). Her leg was amputated below the knee, and there was no sign of recurrent disease when she died six months later.

Case 3—An 81 year old woman presented in 1984 with a large ulcer over the medial aspect and front of

the right lower leg. This had developed 12 months earlier after she fell and abraded her leg. She had bilateral varicose veins and stasis eczema on the ulcerated leg. After three months of follow up the margins of the ulcer had become raised and haemorrhagic. Biopsy showed the histological features of malignant fibrous histiocytoma (see below). Her leg was amputated below the knee, and a prosthetic limb was fitted, which she used without difficulty. She developed nodes in the groin five months later, which were thought clinically to be malignant. These were treated with radiotherapy, and there was no further evidence of metastasis.

Histological findings—All three tumours showed pleomorphic spindle cells with occasional multinucleate cells and mitotic activity ranging from one to four mitoses in each high power field (see figure). A storiform pattern was present in cases 1 and 3 but was less pronounced in case 2. Areas of necrosis and haemorrhage were present in case 1. In all three cases malignant fibrous histiocytoma was diagnosed



Pleomorphic spindle cells arranged haphazardly in malignant fibrous histiocytoma from case 3. Stained with haematoxylin and eosin; $\times 500$

morphologically and with the help of immunocytochemistry. There was no staining by antibodies CK 1 (Dako) or CAM 5.2 (Becton-Dickinson) to intracellular cytokeratin antigens. All the tumours stained positively for vimentin but not for desmin or leucocyte common antigen. The main differential diagnosis of spindle cell squamous carcinoma was excluded in each case.

Comment

Squamous cell carcinoma is a well recognised complication of venous ulceration, and basal cell carcinoma has also been reported.¹ Sarcomatous change has previously been considered exceptionally rare,² and malignant fibrous histiocytoma has never been reported.

Predisposing factors to malignant fibrous histiocytoma include radiotherapy and trauma. None of our patients had a history of radiotherapy, and only one

(case 3) had had a minimal injury. Malignant fibrous histiocytoma is a highly malignant neoplasm with a pronounced tendency to recur locally after excision.³ Distal and superficial tumours, however, carry a better prognosis than those in proximal sites or deeper structures.⁴ This complication of venous ulceration is therefore potentially curable if diagnosed early. All three of our patients were probably cured. It therefore becomes even more important that malignancy should be considered by all doctors managing chronic venous ulcers and that a biopsy should be performed promptly when necessary.

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Is severe bradycardia in veteran athletes an indication for a permanent pacemaker?

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Severe bradycardia may be present in athletes without symptoms who wish to continue training, and the correct way to manage these patients is uncertain.

Case reports

CASE 1

A 66 year old man with 50 years' running experience presented with a non-specific anaemia. He ran between 40 and 129 km a week. Apart from a resting bradycardia he had no clinically detectable cardiovascular abnormality. A resting 12 lead electrocardiogram showed sinus bradycardia, first degree heart block (PR interval=0.31 seconds), normal ventricular axis, and voltage criteria for left ventricular hypertrophy (S wave in V₁+R wave in V_s=39 mm). He exercised on a treadmill (Bruce protocol) for 16.5 minutes. By stage II he had developed ST segment depression of 1 mm

in the inferolateral leads. Ambulatory electrocardiography showed a mean heart rate over 24 hours of 49 beats/minute. His minimum heart rate was 17 beats/minute, at 0300 (figure). He had first and second degree heart block (Mobitz type II), and complete heart block occurred nocturnally. Pauses of greater than 2 seconds occurred on 846 occasions, the longest being 8.9 seconds. Subsequent monitoring in hospital showed recurrent nocturnal ventricular standstill lasting 10-12 seconds.

We implanted a dual chamber permanent pacemaker (Pacesetter AFP 283), and subsequent coronary angiograms were normal. He felt generally more energetic and noticed a considerable improvement in his racing performances.

CASE 2

A 52 year old former professional boxer who ran 11 km daily had risen from bed and lost consciousness. When admitted to hospital he lost consciousness again; this was associated with ventricular standstill lasting 30 seconds. He denied cardiovascular symptoms but admitted to having had episodes of lightheadedness or "muzziness" that were relieved by brisk exertion. We implanted a permanent pacemaker (Vitatron Quintech TX 915 rate responsive generator) on the basis of his history and asystolic pauses. Subsequently his symptoms stopped.

Comment

Athletes' bradycardia is ascribed to an increase in vagal tone,^{1,2} though pharmacological denervation has shown that they have a slower intrinsic heart rate independent of vagal tone. High degree atrioventricular block or prolonged ventricular pauses are rare.^{3,4} Veteran athletes may be more susceptible to bradyarrhythmias because of the decrease in heart rate that occurs with increasing age combined with the effects of many years of physical training.

The absence of underlying cardiac disease in these two patients makes it likely that the profound bradycardia with prolonged cardiac pauses was the result of lifelong endurance training. Whether such secondary bradyarrhythmias require implantation of a permanent pacemaker is uncertain. Nocturnal high degree atrioventricular block, with pauses of up to six seconds, has been reported to resolve after the intensity of physical training has been reduced.⁵ Pacemakers have been implanted in three young adults with prolonged sinus pauses during rapid eye movement sleep because of



Response of heart rate over 24 hours and frequency of cardiac asystole (longer than two seconds). Note maintenance of circadian rhythm