cause is external compression due to coma induced by drugs or alcohol. Awareness of this condition is important, as leg weakness in a patient recovering from coma may be misinterpreted as being due to an intracranial lesion. Sciatic neuropathy occurring as an intraoperative pressure palsy or during prolonged immobilisation in bed is less well recognised than pressure palsies of the ulnar and peroneal nerves, but our findings illustrate that the sciatic nerve is also vulnerable in these situations.

Six patients developed sciatic neuropathy after hip surgery, particularly hip replacement. In one centre this has been reported as occurring in 0·5% of hip replacement operations.[3] The nerve may be damaged by the heat of the setting cement, the cement itself, or by retraction. These neuropathies have been said to have a good prognosis for recovery, and our findings confirm this.

[1] Seddon H. *Surgical disorders of the peripheral nerves.* Edinburgh: Churchill Livingstone, 1975.
[2] Sunderland S. *Nerves and nerve injuries.* Edinburgh: Churchill Livingstone, 1978.
[3] Weber ER, Daube JR, Coventry MB. Peripheral neuropathies associated with total hip arthroplasty. *J Bone Joint Surg* 1976;**58A**:66-9.

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Seasonal variation in incidence of brachial and femoral emboli

The heart is the most common source of brachial and femoral emboli.[1] Rheumatic endocarditis of mitral or aortic valves (particularly associated with atrial flutter or atrial fibrillation), mural thrombi secondary to myocardial infarction, and prosthetic valves are often predisposing factors. I examined the case records of patients in whom peripheral arterial embolus had been diagnosed to compare the incidences of brachial and femoral emboli and to determine whether seasonal variation occurred.

Patients, methods, and results

Analysis was made of 127 consecutive patients (mean age 70·6 (range 41-92) years) presenting with brachial or femoral embolus referred to consultant surgeons with a specialist interest in vascular surgery on one unit of the Royal Infirmary of Edinburgh during the 11 years to 17 April 1983. Femoral embolus was significantly more common than brachial embolus (88 patients *v* 39; $p < 0.001$). There was no relation to sex (59 men, 68 women).

The table shows the seasonal distribution of systemic embolus, with a peak incidence during the winter months and a trough in summer. Comparison of the periods October to March with April to September yielded a significant difference ($\chi^2 = 8.574$, df = 1, $p < 0.01$). The hypothesis of a constant incidence throughout the year was not reasonable ($\chi^2 = 29.19$, df = 11, $p = 0.0021$), but when the logarithms of the observed counts were submitted to regression on a sine (month) and cosine (month) scale jointly on a 12 month cycle assuming Poisson type errors, goodness of fit was satisfactory ($\chi^2 = 13.46$, df = 9, $p = 0.14$).

Monthly distribution of brachial and femoral emboli over 11 years

	Brachial embolus	Femoral embolus	Total
July	2	7	9
August	2	3	5
September	2	8	10
October	2	11	13
November	1	9	10
December	6	11	17
January	7	15	22
February	2	6	8
March	4	6	10
April	8	6	14
May	2	4	6
June	1	2	3
Total	39	88	127

Comment

The distribution of systemic emboli may be related to external temperature. Increased mortality from ischaemic heart disease and stroke during the winter is well documented.[2-4] Although incidence cannot be equated with mortality (which may change differentially), a similar seasonal influence is seen with recordings of systolic and diastolic blood pressure.[2]

Bull *et al* investigated the relation of air temperature to various chemical, haematological, and haemostatic variables.[5] They concluded that there was no association with either routine haematological or clinical chemical variables. The correlation between increased antithrombin III concentrations and higher temperatures (and consequently an increased tendency to thrombosis at lower temperatures) is consistent with increased mortality from vascular accidents at lower temperatures. This is countered, however, by an inverse relation between fibrinolytic activity and temperature—that is, increased fibrinolysis at lower temperatures.

In conclusion, a significant seasonal variation was found in the incidence of brachial and femoral emboli. The reasons for this remain uncertain although there may be a correlation with external temperature.

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[1] Strandness DE. Vascular diseases of the extremities. In: Thorn GW, Adams RD, Braunwald E, Isselbacher KJ, Petersdorf RG, eds. *Harrison's principles of internal medicine.* 8th ed. Tokyo: McGraw-Hill Kogakusha, 1977:1322.
[2] Brennan PJ, Greenberg G, Miall WE, Thompson SG. Seasonal variation in arterial blood pressure. *Br Med J* 1982;**285**:919-23.
[3] Bull GM, Morton J. Environment, temperature and death rates. *Age Ageing* 1978;**7**:210-24.
[4] Bull GM. Meteorological correlates with myocardial and cerebral infarction and respiratory disease. *British Journal of Preventive and Social Medicine* 1973;**27**:108-13.
[5] Bull GM, Brozonic M, Chakraborti R, *et al.* Relationship of air temperature to various chemical, haematological and haemostatic variables. *J Clin Pathol* 1979;**32**:16-20.

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Wheelchairs used by old people

Two thirds of the 200 000 wheelchairs in England and Wales are used by people over retirement age.[1] Most wheelchairs have inflatable tyres, and the brakes work by a plate pressing against the tyre. If the tyre is flat the brake will not function effectively and propelling and steering the wheelchair may be difficult. If the brake does not work properly getting in and out of the wheelchair may be hazardous. We have observed that many wheelchairs used by elderly people have inefficient brakes and flat tyres.

Patients, methods, and results

We interviewed 61 elderly users of wheelchairs in their homes; 55 of them were attending Sherwood Geriatric Day Hospital. The main disabilities necessitating provision of a wheelchair were stroke (34 patients (57%)), arthritis (eight (13%)), and amputation (eight (13%)). Thirty three of the patients were women.

Fifty nine of the wheelchairs were on loan from the Department of Health and Social Security. Three quarters were self propelling, general purpose wheelchairs, the remainder being attendant propelled, transit wheelchairs. Two wheelchairs had solid tyres; the rest had pneumatic tyres.

We asked the patients to demonstrate how to operate the brakes and to produce a pump and show us how to use it. We assessed mental function using a 10 point memory questionnaire. Examination of the wheelchair included inspection of tyres and brakes. We considered tyres to be inadequately inflated if the brake action was compromised by lack of inflation.

We found one puncture, and 18 other wheelchairs had flat tyres. Of the

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