

## Editorial Committee

CD MARSDEN (*Editor*)  
CBT ADAMS  
MR BOND  
A CROCKARD  
LW DUCHEN  
P FENWICK  
MJG HARRISON  
RAC HUGHES  
PG JENNER

PL LANTOS  
DL McCLELLAN  
JC MEADOWS  
B NEVILLE  
C PALLIS  
JD PARKES  
J PAYAN  
JMS PEARCE  
J PICKARD

PF PRIOR  
A RICHENS  
JOHN A SIMPSON  
MICHAEL SWASH  
G TEASDALE  
M TRIMBLE  
E WARRINGTON  
EDITOR *British Medical Journal*  
Technical Editor: KENNETH TILL

THE EDITORIAL COMMITTEE welcomes original papers, which should be addressed to the Editor, Journal of Neurology, Neurosurgery, and Psychiatry, BMA House, Tavistock Square, London WC1H 9JR. Papers are accepted on the understanding that the subject matter has not been and will not be published in any other journal. Papers should deal with original matter and the discussion should be closely relevant to this. Manuscripts should be typewritten in double spacing on one side of the paper only. Two copies (including figures and tables) should be submitted of which only one need be a top copy. A summary of about 50 words should appear at the beginning of each paper. The name(s) of the hospital or laboratory should also appear. Full postal address for correspondence and reprints should be supplied. Receipt of manuscripts will be acknowledged.

The Editor will welcome Short Reports or Preliminary Communications limited to about 1000 words and with no more than one figure and one table. Also welcome are Letters to the Editor.

ETHICS Ethical considerations will be taken into account in the assessment of papers (see the Medical Research Council's publications on the ethics of human experimentation, and the World Medical Association's code of ethics, known as the Declaration of Helsinki (see *British Medical Journal* 1964;2:177)).

ABBREVIATIONS Measurements should be expressed in SI units (see *Journal of Clinical Pathology* 1974;27:590-7; *British Medical Journal* 1974;4:490; *International System of Units* 1972. National Bureau of Standards, Special Publication 330. United States Bureau of Printing: Washington). For recognised abbreviations see *Journal of Neurology, Neurosurgery, and Psychiatry* 1975;38:5; and *Units, Symbols and Abbreviations*, Third Edition 1977, edited by DN Baron, Royal Society of Medicine: London.

ILLUSTRATIONS *Photographs* Unmounted photographs on glossy paper should be provided together with magnification scales when appropriate. *Diagrams* will be reduced to 2¾ inches (68 mm) wide, occasionally to 5¾ inches (145 mm). Lettering should be in either Letraset or stencil and care should be taken that lettering and symbols are of comparable size. Illustrations should not be inserted in the text. They should be marked on the back with figure numbers, title of paper, and name of author. All photographs, graphs and diagrams should be referred to as figures and should be numbered consecutively in the text in Arabic numerals. The legends for illustrations should be typed on a separate sheet. *Tables* should be numbered consecutively in the text in Arabic numerals and each typed on a separate sheet. The format used

in this issue of the Journal should be noted. Vertical lines will not be printed and usually there are only three horizontal lines in each table.

REFERENCES should be in the Vancouver style as in this issue. They should appear in the text by number only in the order in which they occur and should be listed on a separate sheet in the same order. Punctuation must be correct and journal titles should be in full or abbreviated in accordance with the *Index Medicus*. Thus:

Millikan CH, Eaton LH. Clinical evaluation of ACTH and cortisone in myasthenia gravis. *Neurology (Minneapolis)* 1951;1:145-52.

Penn AS. Immunological features of myasthenia gravis. In: Aguayo AJ, Karpatis G, eds. *Topics in Nerve and Muscle Research*. Amsterdam: *Excerpta Medica* 1975:123-32.

Coers C, Woolf AL. *The innervation of muscle. A biopsy study*. Oxford: Blackwell, 1951:16-24.

A reference to unpublished work should not appear in the list but work "in press" may be included provided the name of the journal appears. The author is responsible for the accuracy of references.

REPRINTS Twenty-five reprints will be supplied free of charge. Additional reprints are available at cost if they are ordered when the proof is returned.

CORRECTIONS other than printer's errors may be charged to the author.

COPYRIGHT © 1984 by JOURNAL OF NEUROLOGY, NEUROSURGERY, AND PSYCHIATRY. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the prior permission of the Journal of Neurology, Neurosurgery, and Psychiatry.

NOTICE TO ADVERTISERS Applications for advertisement space and rates should be addressed to the Advertisement Manager, JOURNAL OF NEUROLOGY, NEUROSURGERY, AND PSYCHIATRY, BMA House, Tavistock Square, London WC1H 9JR.

NOTICE TO SUBSCRIBERS The Journal is published monthly. The annual subscription rates are available on request to the Subscription Manager, Journal of Neurology, Neurosurgery & Psychiatry, BMA House, Tavistock Square, London WC1H 9JR. Orders can also be placed locally through any leading subscription agent or bookseller. (For the convenience of readers in the USA subscription orders, with or without payment, can also be sent to: British Medical Journal, Box 560B, Kennebunkport, Maine 04046, USA. All enquiries, however, must be addressed to the Publisher in London).

### Cauda equina compression—an uncommon presentation of diffuse lymphocytic lymphoma

Sir: When spinal cord involvement occurs in non-Hodgkin's lymphoma it is likely to be the first sign of the disease.<sup>1</sup> There are, however, relatively few reports of lymphoma involving the cauda equina.

A 51-year-old Irish scrap metal dealer was well until six weeks before admission when he developed pain in his thighs and difficulty in walking. In the five days before admission he became unable to walk and developed dribbling incontinence of urine. Examination revealed flaccid weakness of the legs with global sensory loss from the level of L2 downwards and lower limb areflexia. The anal sphincter was lax and the bladder distended. There was no lymphadenopathy or hepatosplenomegaly. He was catheterised and transferred to the regional neurosurgical centre for urgent myelography which revealed a complete block at the level of L2. At laminectomy the dura was found covered with friable tumour which infiltrated the laminae of the L2 and L3 vertebrae. A maximal clearance was attempted. Tumour histology showed a highly cellular malignant tumour of uncertain origin with a differential diagnosis including anaplastic carcinoma, amelanotic melanoma and poorly differentiated large cell lymphoma. He received a course of radiotherapy to the lumbar region. On his return to this hospital one month later, he was now found to have a large right tonsil and rubbery axillary, inguinal and submandibular lymph nodes. The tonsil was biopsied and histology showed a poorly differentiated diffuse lymphocytic lymphoma. He was treated with CHOP (cyclophosphamide, adriamycin, vincristine and prednisolone) to which his disease promptly responded. He was able to walk with a stick and had normal bladder control. Three months later he suffered a relapse but responded to further CHOP, and four months after this, a further recurrence in the right orbit and right lingual tonsil responded to radiotherapy. He has subsequently remained well, living independently and apparently disease-free on maintenance chemotherapy eighteen months after his initial presentation.

Lymphoma may involve the spinal cord and cauda equina by epidural compression, cord infiltration or by paraneoplastic myelopathy. In a recent comprehensive review<sup>1</sup> the incidence of spinal cord (including cauda equina) compression was

said to be as high as 5.9% for lymphosarcoma and the authors confirmed previous findings<sup>2,3</sup> that patients with non-Hodgkin's lymphoma are particularly likely to develop spinal cord compression as the first sign of their disease. Indeed, in one series<sup>3</sup> only 15% of 72 patients with non-Hodgkin's lymphoma had previously been so diagnosed prior to the development of spinal cord or cauda equina compression symptoms. Whether any of the 14 patients in this series, with poorly differentiated lymphocytic lymphomas actually presented with cauda equina compression is not stated. The clinical features of midline cauda equina lesions include backache which is characteristically worse on lying down at night, weakness and wasting of the leg muscles, sensory loss in a radicular distribution, impotence and urinary retention. There is a characteristic "saddle" anaesthesia, flaccid paraparesis with depressed or absent lower limb reflexes and a patulous anal sphincter. Less common presentations are with painless leg weakness, raised intracranial pressure and subarachnoid haemorrhage. Recent case reports of lymphomatous compression of the cauda equina have stressed the similarity of presentations to infective polyneuropathy (Guillain-Barré syndrome), meningitis and encephalomyelitis.<sup>4-6</sup> Myelography may demonstrate a complete block, large subdural masses or diffuse symmetrical nerve root swelling.<sup>4,6</sup> The possibility of apparently isolated lymphoma presenting as a cauda equina lesion should be appreciated by clinicians and pathologists, and careful clinical examination for other evidence of reticuloendothelial system involvement at presentation or subsequently, cannot be over-emphasised.

We thank Dr PC Gautier-Smith, Dr RS Kocen and Dr AJ Lees for their advice and Mrs J Salter for kindly typing the manuscript.

SJ KARP  
RL SOUHAMI  
BI HOFFBRAND

The Whittington Hospital,  
London N19, UK

### References

- Henson RA, Urich H. *Cancer and the Nervous System—the Neurological Manifestations of Systemic Malignant Disease*. London: Blackwell Scientific Publications, 1982.
- Mullins GM, Flynn JPG, El-Mahdi AM, McQueen JD, Owens AH. Malignant lymphoma of the spinal epidural space. *Ann Int Med* 1971;74:416-23.
- Haddad P, Thael JF, Kiely JM, Harrison EG, Miller RH. Lymphoma of the spinal extradural space. *Cancer* 1976;38:1862-6.
- Van Allen MW, Rahme ES. Lymphosarcomatous infiltration of the cauda equina. *Arch Neurol* 1962;7:476-81.
- Mullins GM, Eggleston JC, Santos GW, Udrarhyi GB. Infiltration of the cauda equina in lymphosarcoma. *Johns Hopkins Med J* 1971;129:170-6.
- Britt J, Himmelfarb E, Gerald B. Myelographic appearances of meningovascular lymphoma involving cauda equina. *J Can Assn Radiol* 1975;26:88-90.

Accepted 30 January 1984

## Notices

**The Eighth International Congress of Neurological Surgery** will be held in Toronto, Canada, 7-13 July, 1985. Information may be obtained from Professor AR Hudson, 38 Shuter Street, Toronto, Canada M5B 1A6.

**The Second Symposium on the Biology of Brain Tumour** will be held in London on October 24-26, 1984. The principal scientific themes will be molecular neuro-oncology, biologic correlates of neuropathology and imaging, and principles of therapy. It will commemorate the centenary of Rickman Godlee's first operation for malignant glioma at the Maida Vale Hospital with a special historical lecture. Further information may be obtained from MD Walker, National Institute of Neurological and Communicative Disorders and Stroke, Bethesda, MD, 20205, USA, or DGT Thomas, Department of Neurological Surgery, Maida Vale Hospital, Maida Vale, London W9, United Kingdom.