supplementary oxygen who are monitored by routine oximetry and given conventional sedation. Until this information is available, routine use of a β blocker for patients undergoing endoscopic cholangiopancreatography seems premature because the risk of hypotension induced by β blockade may be an additional hazard.

JOHN MANSFIELD
Medical senior registrar
RICHARD CHARNLEY
Consultant surgeon

Gastroenterology Unit,
Freeman Hospital,
Newcastle upon Tyne NE7 7DN

- 1 Rosenberg J, Overgaard H, Andersen M, Rasmussen V, Schulze S. Double blind randomised controlled trial of effect of metoprolol on myocardial ischaemia during endoscopic cholangiopancreatography. *BMJ* 1996;313:258-61. (3 August.)
- 2 Bell GD, McCloy RF, Charlton JE, Campbell D, Dent NA, Gear MWL, et al. Recommendations for standards of sedation and patient monitoring during gastrointestinal endoscopy. *Gut* 1991;32:823-7.

Danish data confirm low prevalence of HRT among women prescribed oral corticosteroids

EDITOR,—L J Walsh and colleagues report the use of oral corticosteroids in a population of 65 786 in Nottinghamshire.¹ They had found few epidemiological data on the use of corticosteroids in community populations, which is surprising, since the potential side effects of corticosteroids—for example, osteoporosis, hypertension, and diabetes—are important.

We report here supplementary data on the use of oral corticosteroids and hormone replacement therapy obtained from a population based prescription registry for the county of North Jutland in Denmark. The region has 330 general practitioners and 487 000 inhabitants. For each prescription for drugs for which the costs are reimbursed the pharmacies collect the name and amount of the drug, the defined daily dose, the personal registration number of the patient, the date that the drug is dispensed, and several other variables.

The population consisted of 242 614 men and 244 379 women. In the database we identified 3023 men (1.2%) and 4133 women (1.7%) who had received at least one prescription for oral corticosteroids in 1993. Walsh and colleagues found that 0.5% of their population had been "continuously" treated with oral corticosteroids. The difference is probably due to the different inclusion criteria, as Walsh and colleagues included only patients treated with oral corticosteroids for at least three months. Among the 4133 women who had received corticosteroids in North Jutland we identified 567 (13.7%) who had received hormone replacement therapy. In their study Walsh and

colleagues found that 14% of the women treated with corticosteroids had received hormone replacement therapy.

The incidence of the most common conditions requiring continuous treatment with oral steroid increases with age. Correspondingly, we found that the proportion of the population treated with steroids increased with age (table 1).

Steroid treatment increases the risk of osteoporosis and fractures,³⁻⁵ and prophylactic treatment for osteoporosis should certainly be considered when steroids are prescribed. We do not know the proportion of patients who had received advice on diet, exercise, or over the counter drugs to help prevent osteoporosis, but we find the proportion of women who received hormone replacement therapy surprisingly low, given the strategies recommended for preventing fractures caused by steroid induced osteoporosis.²

CHARLOTTE OLESEN
Research fellow
HENRIK TOFT SØRENSEN
Associate professor
FLEMMING HALD STEFFENSEN
Assistant professor
Danish Epidemiology Science Centre,
Department of Epidemiology and Social Medicine,
University of Aarhus,
DK-8000 Aarhus C,
Denmark

GUNNAR LAUGE
NIELSEN
Senior research fellow
JØRN OLSEN
Professor

- 1 Walsh LJ, Wong CA, Pringle M, Tattersfield AE. Use of oral corticosteroids in the community and the prevention of secondary osteoporosis: a cross sectional study. *BMJ* 1996;313:344-6. (10 August.)
- 2 Eastell R. Management of corticosteroid induced osteoporosis. *J Intern Med* 1995;237:439-47.
- 3 Spector TD, Sambrook PN. Steroid osteoporosis. *BMJ* 1993;307:519-20.
- 4 Cooper C, Coupland C, Mitchell M. Rheumatoid arthritis, corticosteroid therapy and hip fracture. *Ann Rheum Dis* 1995;54:49-52.
- 5 Verstraeten A, Dequeer J. Vertebral and peripheral bone mineral content and fracture incidence in postmenopausal patients with rheumatoid arthritis: effect of low dose corticosteroids. *Ann Rheum Dis* 1986;45:852-7.

Investigation is needed into why some patients are not offered cardiac rehabilitation

EDITOR,—Jill Pell and colleagues report the influence of social deprivation on the uptake of cardiac rehabilitation.¹ Through their study the authors have identified an important area of research that could eventually lead to improvements in rehabilitation for deprived patients. In 1995 we reported that economically disadvantaged patients showed poorer survival than others after myocardial infarction,² and Pell and colleagues' study suggests a possible mechanism for this: that fewer deprived patients take up and complete rehabilitation programmes.

We note that the type of consultant and the hospital attended were also associated with

uptake of rehabilitation. Just as striking is that the invitation to take up rehabilitation also depended on the consultant and hospital attended. In addition to carrying out research into why deprived patients are less likely to complete rehabilitation we clearly need to ask ourselves why some patients are not invited in the first place. The sizes of the effects suggest that the potential for improvement lies as much with the medical community as with the patients.

DARREN GREENWOOD
Medical statistician

MRC Institute of Hearing Research,
Nottingham NG7 2RD

CHRISTOPHER PACKHAM
Senior lecturer in public health
KENNETH MUIR
Lecturer in epidemiology
RICHARD MADELEY
Director of School of Public Health

Department of Public Health Medicine and Epidemiology,
University Hospital,
Queen's Medical Centre,
Nottingham NG7 2UH

- 1 Pell J, Pell A, Morrison C, Blatchford O, Dargie H. Retrospective study of influence of deprivation on uptake of cardiac rehabilitation. *BMJ* 1996;313:267-8. (3 August.)
- 2 Greenwood D, Packham C, Muir K, Madeley R. How do economic status and social support influence survival after initial recovery from acute myocardial infarction? *Soc Sci Med* 1995;40:639-47.

People will be able to surf across languages for health data on the Internet

EDITOR,—Health research data and other health data are increasingly stored in electronic format on networks, which enables faster and more flexible access to the literature. One of the most widely used on line databases in the health field is Medline, which contains more than 7.5 million citations from over 4000 biomedical journals and is international in scope. Increased access to the Internet will further facilitate worldwide distribution of health information. The Internet currently reaches an estimated 40 million people in 90 countries, and the number of its host computers is expected to exceed 100 million before the year 2000.

Language barriers serve to block the globalisation of health information resources. Although English is widely used in science, not everyone can communicate well in English. Much useful information in web sites on the Internet is in languages other than English. Only a few home pages that are in languages other than English provide abstracts in English. This restricts the sharing of information worldwide.

To help globalise health information further we are setting up a multilingual home page for the global health network (<http://www.pitt.edu/HOME/GHNet/GHNet.html>) on the Internet.^{1,2} The first step is to translate the English version into other languages so that more researchers and practitioners can use the home page in their mother tongue (a Japanese version is at <http://www.pitt.edu/HOME/GHNet/GHNet-j.html>). The second step is to build a home page dealing with health information available from countries where the home page is not in English. The third step will be to put a short description about the site, in English, into each foreign language site along with the email address of a person in charge of the site who can communicate in English. That person will serve as a contact when English speaking people access the site. Finally, we will either include computer assisted translation software among our site services or link our site to others providing such services. Such software now can provide a rough but usable translation, and its quality will improve in the coming years.

Table 1—One year prevalence of treatment with oral corticosteroids in North Jutland, Denmark, by age

Age (years)	No (%) who had received corticosteroids		No (%) of women who had received HRT*
	Men	Women	
0-29	172/99 417 (0.2)	224/93 087 (0.2)	37 (16.5)
30-39	212/35 204 (0.6)	268/33 710 (0.8)	43 (16.0)
40-49	337/36 613 (0.9)	462/34 918 (1.3)	68 (14.7)
50-59	380/26 405 (1.4)	567/26 567 (2.1)	78 (13.8)
60-69	646/21 835 (3.0)	858/23 964 (3.6)	99 (11.5)
70-79	845/16 282 (5.2)	1071/20 130 (5.3)	143 (13.4)
80-89	396/6162 (6.4)	594/9090 (6.5)	85 (14.3)
≥90	35/694 (5.0)	89/1573 (5.7)	14 (15.7)
Total	3023/242 614 (1.2)	4133/24 4379 (1.7)	567 (13.7)

HRT = Hormone replacement therapy.

*Women who had received at least one prescription for corticosteroids.

In this way, more data and findings from many countries will become available to researchers and practitioners worldwide. It will then be possible to surf across languages on home pages on the Internet.

AKIRA SEKIKAWA
Fellow, department of epidemiology
INGRID LIBMAN
Fellow, department of epidemiology
LUCIA IOCHIDA
Fellow
RONALD E LAPORTE
Professor, department of epidemiology

University of Pittsburgh,
Diabetes Research Center,
3460 Fifth Avenue,
Pittsburgh, PA 15213, USA

EUGENE BOOSTROM
Senior public health specialist

World Bank,
1818 H Street NW,
Washington, DC 20433, USA

- 1 Global Health Network Task Force. Towards a global health network. *Current Issues in Public Health* 1995;1:160-4.
- 2 LaPorte RE, Akazawa S, Boostrom E, Campos M, Gamboa C, Gooch T, et al. Global public health and the information superhighway. *BMJ* 1994;309:737.

Pancreatitis may occur with a normal amylase concentration in hypertriglyceridaemia

EDITOR,—Johan Hedström and colleagues report that the trypsin 2- α_1 antitrypsin complex is a diagnostic marker of pancreatitis.¹ This reminds us of a diagnostic problem that arose when only the serum amylase concentration was considered in a patient with severe abdominal pain.

A 39 year old Muslim man presented with severe generalised abdominal pain. The surgical team concluded that his amylase concentration (57 IU/l; normal 0-90 IU/l) excluded acute pancreatitis. He had non-insulin dependent diabetes, smoked 20 cigarettes a day, and rarely drank alcohol. He had bilateral supraorbital xanthelasma and a tender but soft abdomen. Investigations showed a random blood glucose concentration of 13.3 mmol/l, total cholesterol 14.7 mmol/l, and triglycerides >53 mmol/l in a non-fasting sample. An uncuffed calcium concentration was 2.04 mmol/l and plasma albumin 34 g/l. Triglyceride concentrations were subsequently measured in fasting samples (table 1).

Abdominal computed tomography confirmed pancreatic oedema associated with chronic pancreatitis. Pancreatitis secondary to hypertriglyceridaemia was diagnosed despite the normal plasma amylase concentration. After the administration of heparin (10 000 IU/24 h) his plasma amylase concentration rose and cholesterol and triglyceride concentrations fell. The fractional amylase:creatinine clearance ratio was 13.6% (normal 1-5%). Liver function and the clotting profile remained normal throughout. Ciprofibrate (100 mg daily) was given to reduce circulating triglyceride concentrations further by stimulating lipoprotein lipase.

Acute pancreatitis is diagnosed clinically, but the diagnosis often depends on the continued biochemical finding of an increased serum amylase concentration. In conditions with extensive pancre-

atic necrosis (acute fulminant or acute on chronic pancreatitis) or in the presence of hypertriglyceridaemia the amylase concentration may be normal or low.² The amylase:creatinine clearance ratio may be a more sensitive indicator of acute pancreatitis than serum or urine concentrations alone.

Low dose heparin (5000-10 000 IU/ml) stimulates lipase activity and reduces very low density lipoprotein and triglyceride concentrations through release of lipoprotein lipase bound to the epithelium, which metabolises circulating very low density lipoprotein particles. Although repeated heparin doses reduce plasma triglyceride concentrations,³ use of heparin in reducing hypertriglyceridaemia in the short term is not well recognised. In the short term heparin is responsible for release of lipoprotein lipase into the circulation, but prolonged use may result in a profound disturbance of lipoprotein metabolism and, paradoxically, hypertriglyceridaemia.^{4,5} In our patient continuous intravenous infusion of low dose heparin reduced the total triglyceride concentration from 53 mmol/l to 26.2 mmol/l within 12 hours.

We agree that clinical suspicion of pancreatitis should remain in patients with a normal serum amylase concentration,¹ particularly in the presence of hypertriglyceridaemia. Short term treatment with low dose heparin reduces the hypertriglyceridaemia.

PANKAJ SHARMA
Medical registrar
SHARON LIM
Senior house officer

Department of Medicine,
St Helier's NHS Trust,
Carshalton,
Surrey SM5 1AA

MORAG HORNE
Senior registrar
Department of Clinical Biochemistry,
St George's Hospital Medical School,
London SW17 0RE

DAVID JAMES
Senior house officer
ROBIN T ORCHARD
Consultant physician

CARL A SEYMOUR
Professor

- 1 Hedström J, Sainio V, Kempainen E, Haapiainen R, Kivilaakso E, Schröder T, et al. Serum complex of trypsin 2 and α_1 antitrypsin as diagnostic and prognostic marker of acute pancreatitis: clinical study in consecutive patients. *BMJ* 1996;313:333-7. (10 August.)
- 2 Greenberger NJ, Toskes PP. Approach to the patient with pancreatic disease. In: Braunwald E, Isselbacher KJ, Petersdorf RG, Wilson JD, Martin JB, Fauci AS, eds. *Harrison's principles of internal medicine*. New York: McGraw Hill, 1987:1368-72.
- 3 Tornvall P, Olivecrona G, Karpe F, Hamsten A, Olivecrona A. Lipoprotein lipase mass and activity in plasma and their increase after heparin are separate parameters with different relations to plasma lipoproteins. *Atherosclerosis Thromb Vasc Biol* 1995;8:1086-93.
- 4 Bagdade JD, Porte D, Bierman EL. Hypertriglyceridemia. A metabolic consequence of chronic renal failure. *N Engl J Med* 1968;279:181-5.
- 5 Watts GF, Henderson CA, Richmond W. Lipoprotein lipase deficiency due to long-term heparinization presenting as severe hypertriglyceridaemia in pregnancy. *Postgrad Med J* 1991;67:1062-4.

Getting a mummy's consent

Perhaps consent came from a relative ...

EDITOR,—Patrick D Horne and colleagues report the earliest published case of aspergillosis.¹ We note that the specimen featured in the photomicrograph was from Egypt, circa 1450 BC. Because the report was followed by Minerva's

statement that such submissions should include signed consent to publication from the patient we wonder whether Minerva received such consent in this case. If not, was it provided by the next of kin—perhaps the mummy's mummy?

C J MEUX
Senior lecturer in forensic psychiatry

Institute of Psychiatry,
London SE5 8AF

G STEGEN
Registrar in psychotherapy

Winterbourne House,
Reading RG1 4YL

1 Horne PD, Summerbell RC, Redford S. Minerva. *BMJ* 1996;313:240. (27 July.)

... or was in hieroglyphics

EDITOR,—I was impressed that the authors managed to obtain the signature of a mummy recovered from the 1450 BC tomb of Parennefer at Luxor¹: was it in hieroglyphics?

A EDWARDS

Consultant physician in genitourinary medicine

Harrison Department of Genitourinary Medicine,
Radcliffe Infirmary,
Oxford OX2 6HE

1 Horne PD, Summerbell RC, Redford S. Minerva. *BMJ* 1996;313:240. (27 July.)

Persistence sometimes pays off

EDITOR,—As an admirer of Minerva, I was disappointed with her lack of rigour in requesting consent to publication from an Egyptian mummy taken from the tomb of Parennefer.¹ In contrast, the persistence of two American agronomists, as recounted by Dean Griffin of St Patrick's Cathedral, Dublin, is exemplary.² Shortly after his election the dean received a letter from the two Americans addressed to a Dr Jonathan Swift. They requested permission to quote "from your recently published book *Gulliver's Travels*, New York, 1964." The dean, sensing a practical joke, ignored the plea.

Three weeks later a second, more urgent, missive arrived, imploring Dean Swift to respond "as our publishers are pressing us with a view to securing a firm publication date." The dean replied: "Dear Agronomists, Jonathan Swift left this place in 1745, leaving no forwarding address. Where he is now God alone knows. However, in his place as Dean I am happy to give the permission you require."

ANDREW MURPHY

Senior lecturer

Department of Family Medicine and General Practice,
Royal College of Surgeons in Ireland Medical School,
Mercer's Health Centre,
Dublin 2,
Republic of Ireland

1 Horne PD, Summerbell RC, Redford S. Minerva. *BMJ* 1996;313:240. (27 July.)

2 *St Patrick's pantry: a recipe collection*. Dublin: St Patrick's Cathedral, 1991:122.

A dead man can't argue

EDITOR,—I read with interest the claim to the earliest published case of aspergillosis, in a mummy.¹ How remarkable that this mummy was able to give signed consent for publication of this submission. Perhaps the authors can provide some useful tips for those of us who are involved in tortuous dealings with ethical committees. But then again, a dead man can't argue....

JACKIE WALTON

Lecturer

Department of Medical Imaging,
Faculty of Medicine,
University of Liverpool,
Liverpool L69 3BX

1 Horne PD, Summerbell RC, Redford S. Minerva. *BMJ* 1996;313:240. (27 July.)

Table 1—Biochemical results in patient with pancreatitis and hypertriglyceridaemia who was treated with heparin

	Amylase (IU/l)	Cholesterol (mmol/l)	Triglyceride (mmol/l)	Glucose (mmol/l)
On admission	57	14.7	>53	13.3
At 12 hours	ND	11.2	26.2	ND
Day 2	464	12.3	18.9	6.5
Day 3	56	10.4	9.9	4.9
Day 6	98	7.2	6.4	5.1

ND = Not done.