

amylase levels immediately fell below normal (table). After this drop, amylase levels gradually rose to normal after 3–5 days.

Thus, the release of amylase from the native pancreas into the bloodstream seems to be depressed when the patient is carrying a functioning second pancreatic gland. The mechanism for this is not obvious. The native exocrine pancreas is mainly controlled by gastrointestinal hormones which respond to local alterations in the gastric and duodenal content. Since the pancreatic graft is connected to a jejunal Roux loop some 50 cm distal to the duodenum in our patients, a hormonal mechanism seems unlikely. Perhaps the amylase found in the blood is not simply an effect of leakage from the pancreas but is due to carefully controlled release into the bloodstream. If so, an interaction between a pancreatic graft and the native pancreas would seem logical. However, another question immediately arises. Why do we have amylase in the blood?

Department of Transplantation Surgery,  
Karolinska Institute,  
Huddinge Hospital,  
S-141 86 Huddinge, Sweden

GUNNAR TYDÉN  
CARL G. GROTH

1 Groth CG, Collste H, Lundgren G. Successful outcome of segmental human pancreatic transplantation with enteric diversion after modification in technique *Lancet* 1982; **ii**: 522–24

### TRANSMISSION OF COWPOX VIRUS INFECTION FROM DOMESTIC CAT TO MAN

SIR,—Nodular skin lesions with systemic signs (pyrexia, anorexia, and respiratory distress) are the clinical basis of cowpox virus infections occasionally reported in domestic cats and in cheetahs and other exotic felines.<sup>1,2</sup> Virus identification was based mainly on the morphological characteristics of lesions on chorioallantoic membrane, the presence of cytoplasmic inclusion bodies, serology, and electron microscopy. Except in exotic animals and cattle, cowpox virus infections have never been reported as being zoonotic.<sup>2,3</sup>

At our animal clinic a domestic European short-haired cat, 2 months of age, was seen with primary symptoms of rhinitis and erosive, ulcerative lesions of the labial skin and perinasal area. The animal had been housed in a barn in a field and these symptoms manifested when the cat was introduced into an urban household. One week after the first symptoms, multiple nodular skin lesions appeared with firm crusts. Removal of the crusts revealed erosive, erythematous lesions which healed spontaneously within 4 weeks with scar formation. Another cat in the same household had vesicular and erosive lesions in the mouth and on the head a few weeks after introduction of the diseased animal.

10 days after the appearance of the skin lesions of the first cat, the owner noted an ulcer with erythematous borders (about 1.5 cm in diameter) on the back of her right hand. She felt ill, with lethargy and pyrexia, and consulted a doctor.

Crust from the skin lesions and samples of serum from the cats and their owner were collected. Virus isolation studies (from one cat and the owner) and serological tests (both cats and the owner) showed characteristic features of orthopox virus infection, specifically cowpox virus. These suggest that cowpox virus was transmitted from a domestic cat to man.

Poxvirus isolates from domestic cats are increasingly reported,<sup>4</sup> and physicians and public-health authorities must become aware of the domestic cat as a potential source of cowpox virus infection for human populations, now that variola vaccination has been discontinued.

Dermatology Section,  
Small Animal Clinic,  
State University of Utrecht,  
3584 CM Utrecht, Netherlands

A. WILLEMSE  
H. F. EGBERINK

Department of Virology, Utrecht

- 1 Baxby D, Ashton DG, Jones D, et al. Cowpox virus infection in unusual hosts. *Vet Rec* 1979; **109**: 175
- 2 Thomsett LR, Baxby D, Denham EM. Cowpox in the domestic cat. *Vet Rec* 1978; **108**: 567
- 3 Marennikova SS, Shelukhina EM, Efremova EV. New outlook on the biology of cowpox virus. *Acta Virol* 1984; **28**: 437–44
- 4 Gaskell RM, Gaskell CJ, Evans RJ, et al. Natural and experimental pox virus infection in the domestic cat. *Vet Rec* 1983; **112**: 164–70

### CRYPTOCOCCUS NEOFORMANS VAR GATTII IN EUROPE

SIR,—Whereas *Cryptococcus neoformans* var *neoformans* is isolated throughout the world, *C. neoformans* var *gattii* (Vanbreuseghem and Takashio) is prevalent only in tropical and subtropical regions.<sup>1–3</sup> We report on a 40-year-old man from southern Germany who, since 1982, has had severe meningoencephalitis due to *C. neoformans* var *gattii*. Several CSF cultures yielded *C. neoformans*. These cultures were further differentiated through subculture on canavanine/glycine/bromthymol-blue agar<sup>4</sup> and were serologically confirmed as serotype B. Although the patient had been treated immediately after diagnosis with a combination of amphotericin B and 5-fluorocytosine, optic atrophy with permanent loss of vision ensued. Since our patient had never been abroad, this is the first proven autochthonous case of meningoencephalitis due to *C. neoformans* var *gattii* in Europe.

In contrast to *C. neoformans* var *neoformans*, *C. neoformans* var *gattii* has never been cultured from environmental sources. The lung is the usual portal of entry for *C. neoformans* and this man worked as a ventilation mechanic in sawmills and woodworking factories in Bavaria. He was, therefore, exposed to high levels of wood dust, including that of imported tropical trees. Attempts to isolate the causative organism from suspected environmental sources were unsuccessful.

K.-H. KOHL  
H. HOF  
A. SCHRETTENBRUNNER  
H. P. R. SEELIGER

Institute of Hygiene,  
University of Wurzburg,  
8700 Wurzburg, West Germany

Laboratory of Clinical Investigation,  
NIAID,  
Bethesda, Maryland, USA

K. J. KWON-CHUNG

- 1 Kwon-Chung KJ, Bennett JE. Epidemiologic differences between the two varieties of *Cryptococcus neoformans*. *Am J Epidemiol* 1984; **120**: 123–30
- 2 Scholer HJ. Diagnosis of cryptococcosis and monitoring of chemotherapy. *Mykosen* 1985; **28**: 5–16.
- 3 Mishra SK, Staib F, Folkens U, Fromtling RA. Serotypes of *Cryptococcus neoformans* strains isolated in Germany. *J Clin Microbiol* 1981; **14**: 106–07.
- 4 Kwon-Chung KJ, Polachek I, Bennett JE. Improved diagnostic medium for separation of *Cryptococcus neoformans* var *neoformans* (serotypes A and D) and *Cryptococcus neoformans* var *gattii* (serotypes B and C). *J Clin Microbiol* 1982; **15**: 535–37

### LEGIONNAIRES' DISEASE IN STAFFORDSHIRE

SIR,—The letter by Dr Staniland and colleagues (June 8, p 1329) requires comment. Their communication is premature and inadequate. Details of our experience, which is extensive, will be published after scientific analysis, so that some rational recommendations may be made. It is encouraging to read that their conclusions, based on two cases, are in broad agreement with the recommendations of the Pneumonia Sub-Committee of the British Thoracic Association. There was no talk of “mystery viruses and undiscovered diseases” from the medical staff in this district.

PETER R. DAGGETT  
ANDREW J. FAIRFAX  
JOHN L. FRANCIS  
JOHN A. GIBSON

Staffordshire General Infirmary,  
Stafford ST16 2PA

### RECEPTOR ACTIVITY FOR POLYMERISED HUMAN ALBUMIN IN HEPATITIS B VACCINE

SIR,—Human plasma-derived hepatitis B vaccine is thought to be effective and safe.<sup>1,2</sup> It consists of highly purified 22 nm hepatitis B surface particles which are free of nucleic acid. However, hepatitis B virus (HBV) infection can occur even in the presence of apparently adequate titres of anti-HBs.<sup>3,4</sup> Furthermore, neutralisation of HBV infection can occur by immunisation with hepatitis B core antigen.<sup>5</sup> Thus protection against HBV infection seems to be biologically complex, and HBV-associated antigens other than HBsAg can stimulate immunity against HBV.

HBV has on its surface a protein with receptor activity for polymerised human albumin, and this receptor protein is found both with the complete virus (Dane particles) and with a