(SE) percentage decrements in serum bilirubin concentrations were 46.4 (2.6) and 22.6 (3.0) for the bluegreen and special-blue groups, respectively (p<0.0001). At 24 h 19 of the blue-green group terminated phototherapy, whereas 10 of the special-blue group still needed light treatment (p<0.0001).

The success of blue-green phototherapy is mainly due to the combined effects of the increase from blue to green of the quantum yield of lumirubin, responsible for the quickest pigment clearance in human beings; a corresponding decrease of ZE-BR quantum yield; and filtering effects of the skin, which attenuates more blue than green light. Our results represent the first significant improvement of phototherapy efficiency following the development and introduction of the special-blue lamp by Sisson in 1970, and is based on more than 10 years of interdisciplinary studies between our groups. The phototherapy exposure time has now been reduced to 1 day in the majority of preterm infants, ensuring less stress to the infant and less interference with nursing care.

*Gian Paolo Donzelli, Simone Pratesi, Gherardo Rapisardi, Giovanni Agati, Franco Fusi, Riccardo Pratesi
*Department of Pediatrics, University of Florence, Ospedale Meyer, 50132 Florence, Italy; Institute of Quantum Electronics, CNR, Forence; and Department of Physics, University of Florence

- 1 Donzelli GP, Pratesi R. Progress in phototherapeutic systems for neonatal hyperbilirubinemia. *SPIE* 1994; **2084**: 332–44.
- 2 Agati G, Fusi F, Donzelli GP, Pratesi R. Quantum yield and skin filtering effects on the formation rate of lumirubin. § Photochem Photobiol B 1993; 18: 197-203.
- 3 Vecchi C, Donzelli GP, Migliorini MG, Sbrana G, Pratesi R. New light in phototherapy. Lancet 1982; ii: 390.
- 4 Pratesi R. Two lights for phototherapy. Lancet 1983; ii: 859.
- 5 Sisson TRC, Kendall N, Davies RE, Berger D. Factors influencing the effectiveness of phototherapy in neonatal hyperbilirubinemia. Birth Defects 1970; 6: 100-05.

Risperidone for psychotic and behavioural symptoms in Lewy body dementia

SIR—Lewy body dementia (LBD) is characterised by progressive dementia with fluctuation of cognitive performance, hallucinations, and extrapyramidal features. In addition supersensitivity to neuroleptics is common, which makes treatment with conventional neuroleptics of the behavioural and psychotic symptoms that commonly occur in LBD problematic. Risperidone is a novel neuroleptic that acts as an antagonist at D2 and 5 HT receptors. Probably because of this dual action it has a much lower rate of extrapyramidal side-effects than older neuroleptics. We describe three patients with LBD (diagnosed by McKeith's clinical criteria) whose behavioural disturbances were treated successfully with small doses of risperidone.

A 78-year-old-old woman (case 1) with a 6-month history of LBD with a rapidly progressing course, striking fluctuation, and prominent visual hallucination became unmanageable in her residential home and was admitted to hospital. She had developed persecutory delusions, was agitated, constantly wandering, and interfering with other residents. She had been unsuccessfully treated with sulpiride and haloperidol, which caused extrapyramidal side-effects, and diazepam, which led to increasing confusion. She was stared on risperidone 0.5 mg once daily and after 2 weeks was calmer and less distressed with no delusions or hallucinations. After 1 month she had improved sufficiently to be discharged (still on risperidone) back to her residential home.

A 66-year-old man (case 2) with a 6-year history of LBD was admitted to hospital for assessment of poor self care.

While in hospital he was observed to be physically aggressive. He was first treated with sulpiride and diazepam, which led to excessive sedation interspersed with aggressive outbursts. He was transferred to a continuing care ward where he continued to manifest persecutory delusions and threatening behaviour. He was started on risperidone 0.5 mg once daily and showed much improvement, becoming cheerful and cooperative, and joining in occupational therapy for the first time. He was maintained on risperidone and after 3 months was sufficiently improved to be referred to the local authority for transfer to a community setting.

A 71-year-old man (case 3) with LBD for 6 years developed marked visual and auditory hallucinations which his wife found distressing and difficult to deal with. He began attending a day hospital and was started on risperidone 0.5 mg twice a day. His hallucinations resolved and his cognitive functioning improved. There was no determination in his rigid-akinetic syndrome apart from some worsening of dysarthria.

Each patient's clinical status was assessed at baseline and after 28 days of treatment with the behavioural pathology in Alzheimer's disease rating scale (BEHAV AD),³ which measures behavioural symptoms, delusions, suspiciousness, and hallucinations; the mini mental state examination⁴ (MMSE) to assess cognitive function; and the Webster disability scale,⁵ to measure extrapyramidal side-effects. The scores were:

Case	BEHAVE AD		MMSE		Webster	
	Before	After	Before	After	Before	After
1	12	5	9	9	15	14
2	11	0	13	13	19	18
3	8	4	16	21	13	15

The BEHAV AD was also administered at 7 and 14 days:

Case	BEHAVE AD					
	Day 0	Day 7	Day 14	Day 28		
1	12	10	- 7	5		
2	11	4	1	0		
3	8	0	0	4		

We have found risperidone to be an effective treatment of psychotic and behavioural symptoms in these three cases of LBD. Though cognitive decline is a common complication of neuroleptic treatment in such patients, no such decline was seen with risperidone. Indeed case 3 showed clinical improvement on the MMSE despite experiencing slight worsening in extrapyramidal symptoms. We suggest that risperidone may be a useful treatment of psychotic and behavioural symptoms in LBD and warrants controlled evaluation.

*R L Allen, Z Walker, Penny J D'Ath, Cornelius L E Katona
*Department of Psychiatry, Princess Alexandra Hospital, Harlow, Essex CM20 1QX,
UK; and University College London Medical School, London WC1

- 1 McKeith I, Fairbairn A, Perry R, Thompson P, Perry E. Neuroleptic sensitivity in patients with senile dementia of Lewy body type. BMJ 1992; 305: 673-78.
- 2 Owens DGS. Extrapyramidal side effects and tolerability of risperidone: a review. *J Clin Psychiatry* 1994; **55** (suppl): 29–35.
- 3 Reisberg B, Borenstein J, Salob SP, Franssen E, Georgotas A. Behavioural symptoms in Alzheimer's disease: phenomenology and treatment. J Clin Psychiatry 1987; 48 (suppl): 9-15.
- 4 Folstein MF, Folstein SE, McHugh PR. "Mini-mental state": a practical method for grading the cognitive state of patients for the clinician. J Psychiatr Res 1975; 12: 189–98.
- 5 Webster DD. Critical analyses of the disability in Parkinson's disease. Mod Treat 1968; 5: 257–82.