

Game Changers

CONFUSED BY ENCEPHALOPATHY

(Dr Ian Cadden)

Hepatic encephalopathy (HE) is an impairment of cognition and/or consciousness affecting up to 70% of patients with cirrhosis. Whilst overt encephalopathy (OHE) is associated with a reduction in life expectancy, minimal encephalopathy (MHE) is known to effect quality of life, social interaction and driving capacity.

Previously control of HE was restricted to identification and management of potential precipitants (gastrointestinal bleeding, sedatives, infection, constipation) together with the use of non-absorbable disaccharides (lactulose) and agents to lower serum ammonia (L-ornithine-L-aspartate). Rifaximin a non-absorbable antibiotic, initially licensed for traveller's diarrhoea, is effective in the management of both OHE and MHE, received its license in 2013.

Rifaximin demonstrated a reduction in breakthrough HE and hospitalisations (4 patients needing 6 months treatment to prevent one episode of OHE and 9 to prevent one admission)¹. In cirrhotics with MHE, rifaximin improves cognitive function, health-related quality of life² and reduces driving-related errors³.

Given the majority of those with cirrhosis will develop some degree of HE rifaximin affords significant benefit by improving function and reducing the need for hospitalisation.

1. Bass NM, Mullen KD, Sanyal A, Poordad F, Neff G, Leevy CB, et al. Rifaximin treatment in hepatic encephalopathy. *N Engl J Med*. 2010;**362**(12):1071-81.
2. Sidhu SS, Goyal O, Mishra BP, Sood A, Chhina RS, Soni RK. Rifaximin improves psychometric performance and health-related quality of life in patients with minimal hepatic encephalopathy (the RIME Trial). *Am J Gastroenterol*. 2011;**106**(2):307-16.
3. Bajaj JS, Pinkerton SD, Sanyal AJ, Heuman DM. Diagnosis and treatment of minimal hepatic encephalopathy to prevent motor vehicle accidents: a cost-effectiveness analysis. *Hepatology*. 2012;**55**(4):1164-71

ENDOBONCHIAL ULTRASOUND-GUIDED TRANSBRONCHIAL NEEDLE ASPIRATION

(Dr Kathy Cullen & Dr Tim Warke)

Accurate staging of lung cancer is vital in planning treatment and informing prognosis. Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is now available in several centres in Northern Ireland.

In selected cases, hilar and mediastinal lymph nodes can be sampled in a minimally invasive way under ultrasound

guidance, improving diagnostic yield and avoiding the need for a mediastinoscopy. The target node or mass is localised using a combination of an endobronchial image, real-time ultrasound image of structures beyond the airway lumen and doppler flow to help avoid vascular structures. Complication rates are low and the procedure is well-tolerated.

In a direct comparison with mediastinoscopy, EBUS-TBNA demonstrated significantly greater sensitivity¹. We are looking forward to the initial feedback from the local consultants who are using this exciting new diagnostic tool.

1. Ernst A, Anantham D, Eberhardt R, Krasnik M, Herth FJ. Diagnosis of mediastinal adenopathy-real-time endobronchial ultrasound guided needle aspiration versus mediastinoscopy. *J Thorac Oncol*. 2008;**3**(6):577-82.

MULTIPLE SCLEROSIS IS A TREATABLE DISEASE.

(Dr Stanley Hawkins)

Over the last forty years I have witnessed a transformation from therapeutic nihilism to measured management of MS. In about 90% of people with MS it starts with a relapsing-remitting phase. After 15-20 years a phase of gradual progression of disability emerges (the secondary progressive phase). In about 10%, there is a progression of disability from the outset.

In the relapsing-remitting phase there is now a range of licensed medical substances which can be offered to patients. Several forms of interferon beta have been available on prescription in the UK for 18 years. These have shown a reduction in frequency of relapses. For the last 5 years Natalizumab, a humanized monoclonal antibody against alpha-4 integrin, has been available as second line therapy. Oral disease modifying therapies are also now available, offering a wider range of choice for those who do not like frequent injections^{1,2}.

In the secondary progressive phase it has been more challenging to measure slowing of the rate of progression. It has been impossible so far to see reversal. However in the last year, results of long-term follow-up of patients recruited to a double blind placebo controlled trial of beta interferon in 1988-90 have shown better survival in those who were in the active treatment group³.

1. Bowen JD. Solving the mystery of MS. *Sci Am Mind*. 2013;**24**(May/June): 50-57.
2. Ali R, Nicholas R StJ, Muraro PA. Drugs in development for relapsing multiple sclerosis. *Drugs*. 2013; **73**: 625-650. DOI 10.1007/s40265-013-0030-6
3. Goodin DS, Reder AT, Ebers GC, Cutter G, Kremenchutzky M, Oger J, et al. Survival in MS: a randomized cohort study 21 years after the start of the pivotal IFNβ-1b trial. *Neurology*. 2012; **78**(17): 1315-22.