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Stem cell 'therapy' reduces MS symptoms

A group of patients suffering from the early stages of multiple sclerosis have shown significant improvements in their condition after being injected with stem cells, scientists say.

Symptoms were reduced in 17 sufferers in a test group of 21 after they were treated with blood stem cells taken from their bone marrow. These haemopoietic cells, which are the precursors to all the components of blood, were used to replace types of white blood cell that attack the central nervous system in MS sufferers.

About 85,000 people in Britain suffer from MS, which is incurable. It weakens the body's nervous system and, in most cases, causes gradual and irreversible neurological damage.

The research, conducted by doctors at Northwestern University Feinberg School of Medicine, Chicago, involved using drugs to remove the immune system cells (lymphocytes) that were damaging the nervous system and then replacing them with stem cells.

The scientists found that the new lymphocytes formed from the stem cells effectively "reset" the patient's immune system and no longer caused any nerve damage. This appeared to help the body to rebuild myelin, the sheath that protects nerve fibres from becoming damaged.

Of the 21 patients, 17 showed improvement — regaining balance, having fewer problems walking and suffering less leg weakness — and nerve damage at least stabilised in the other four patients.

Richard Burt, an immunologist at Northwestern University, said that the findings were promising. "It is the first therapy shown to reverse neurological disability in multiple sclerosis and turn the tide of the disease," he said.

Dr Burt said that further studies involving a larger number of patients were required to confirm his findings, which are published today in *The Lancet Neurology*.

A control trial, in which patients are randomly assigned the treatment or a placebo, has been approved with 110 patients with research teams in the United States, Canada and Brazil.

The 21 patients, who had an average age of 33, were in the early stage of the disease — known as the relapsing remitting phase — which is characterised by intermittent symptoms.

Over a period of between 10 and 15 years most patients develop second-phase MS, characterised by gradual and irreversible damage. Available therapies, including steroids and interferons, are effective mainly in the relapsing-remitting phase.

The study showed that 81 per cent of the patients improved by at least one point on the Expanded Standard Disability Status Scale, which grades severity of disability between 1 and 10. No final score was lower than before the stem cell transplantation, while in almost half of cases they improved two or more points on the scale. The procedure was well tolerated, with only five suffering minor side effects that improved with treatment.

Dr Burt and colleagues followed up the patients, 11 women and ten men aged between 20 and 53, for three years. None experienced a relapse.

Writing in an accompanying commentary, Professor Gianluigi Mancardi, of the University of Genova, Italy, said the results were encouraging. It's exciting to see that in this trial not only is progression of disability halted, but damage appears to be reversed" he said. "Stem cells are showing more and more potential in the treatment of MS".

It's amazing to feel normal

Multiple sclerosis had left Barry Goudy, a car salesman from Michigan, struggling to work, often unable to climb stairs and needing hospital care after attempting a round of golf (Sam Lister writes). After suffering the disease for eight years — with aggressive relapses every five or six months — Mr Goudy underwent a stem-cell transplantation in 2003 when he was in his mid-forties.

In the five years since, he has not experienced any symptoms of the disease. "I am MS-free — it's just amazing," he said. "I used to suffer from all this numbness. I used to have to leave my job to go home and rest. It was terrible." After five days of chemotherapy — which effectively removed his immune system — Mr Goudy was injected with the stem cells that reconfigured his white blood cells, halted the fatigue and transformed his life. "I live a normal life," he said. "I am on no medicine at all."

www.mssociety.org.uk 30 January 2009

Stem Cell trial results – The Lancet Neurology

The Lancet Neurology has today published the results of a trial involving stem cell transplantation in people with relapsing remitting multiple sclerosis (MS).

The results of the Chicago study of around 20 people show that the treatment halted progression of disability and could potentially reverse the damage caused in MS.

Dr Doug Brown, Research Manager at the MS Society, said: "These are very encouraging results and it's exciting to see that in this trial not only is progression of disability halted, but damage appears to be reversed.

"Stem cells are showing more and more potential in the treatment of MS and the challenge we now face is proving their effectiveness in trials involving large numbers of people."

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Personal Rehab Helpful for MS

An individualised rehabilitation programme effectively reduces disability in MS, according to a study published in the Journal of Neurology, Neurosurgery, and Psychiatry.

In the study 101 people with MS were randomly assigned to an individualised programme or standard care. Significantly reduced disability was seen in the individualised programme group who also showed greater overall independence as well as specific improvements in walking and self care.

Overall, 70.8 per cent of patients in the individualised programme group improved, compared with 13 percent of those in the standard care group. More patients in the standard care group, deteriorated over the study period.

Patients in the individualised programme received comprehensive multidisciplinary rehabilitation over 12 months, which included intensive treatment aimed at patient education, health promotion, bladder retraining, and mobilisation.

Genetic study shows direct link between vitamin D and MS susceptibility 'gene'

Scientists have found evidence that a direct interaction between vitamin D and a common genetic variant alters the risk of developing multiple sclerosis (MS).

The research published in the journal PLoS Genetics suggests that vitamin D deficiency during pregnancy and the early years may increase the risk of the offspring developing MS later in life.

The causes of MS are unclear, but it has become evident that both environmental and genetic factors play a role. Previous studies have shown that populations from Northern Europe have an increased MS risk if they live in areas receiving less sunshine.

This supports a direct link between deficiency in vitamin D, produced in the body through the action of sunlight, and increased risk of developing the condition.

Now, in a study funded by the UK's MS Society, the MS Society of Canada, the Wellcome Trust and the Medical Research Council, researchers at the University of Oxford and the University of British Columbia have established a direct relationship between a gene variant known as DRB1*1501 and vitamin D.

The research has been welcomed by Simon Gillespie, Chief Executive of the MS Society (UK).

"These remarkable results tie together leading theories about the environment, genes and MS but they are only part of the jigsaw," he said. "This discovery opens up new avenues of MS research and future experiments will help put the pieces together."

While one in 1,000 people in the UK are likely to develop MS, this number rises to around one in 300 amongst those carrying a single copy of the variant and one in 100 of those carrying two copies.

The researchers found that proteins activated by vitamin D in the body bind to a particular DNA sequence lying next to the DRB1*1501 variant, in effect switching the gene on.

"In people with the DRB1 variant associated with MS, it seems that vitamin D may play a critical role," said co-author Dr Julian Knight. "If too little of the vitamin is available, the gene may not function properly."

"We have known for a long time that genes and environment determine MS risk," said Professor George Ebers, University of Oxford. "Here we show that the main environmental risk candidate – vitamin D – and the main gene region are directly linked and interact."

"Our study implies that taking vitamin D supplements during pregnancy and the early years may reduce the risk of a child developing MS in later life," said lead author Dr Sreeram Ramagopalan.

"Vitamin D is a safe and relatively cheap supplement with substantial potential health benefits. There is accumulating evidence that it can reduce the risk of developing cancer and offer protection from other autoimmune diseases."

New Pathways Issue 53

Sativex Not Linked To Mental Health Problems

Treatment with the cannabis based drug Sativex did not bring on mental illness and did not impair the mental faculties of a group of MS patients who were new to taking the drug, research has found.

However researchers noted that at doses higher than those used for therapeutic purposes, interpersonal sensitivity, aggressiveness, and paranoid features might arise. It was said, however, that further research would be necessary to confirm this finding.

Vitamin is ray of sunshine for MS patients

Multiple sclerosis could be prevented though daily vitamin D supplements, scientists told *The Times* last night.

The first causal link has been established between the "sunshine vitamin" and a gene that increases the risk of MS, raising the possibility that the debilitating auto-immune disease could be eradicated.

George Ebers, Professor of Clinical Neurology at the University of Oxford, claimed that there was hard evidence directly relating both genes and the environment to the origins of MS.

His work suggests that vitamin D deficiency during pregnancy and childhood may increase the risk of a child developing the disease.

He has also established the possibility that genetic vulnerability to MS, apparently initiated by lack of vitamin D, may be passed through families.

These risks might plausibly be reduced by giving vitamin D supplements to pregnant woman and young children.

"I think it offers the potential for treatment which might prevent MS in the future," Professor Ebers said.

"Our research has married two key pieces of the puzzle. The interaction of vitamin D with the gene is very specific and it seems most unlikely to be a coincidence of any kind."

Warnings over sun exposure could now also be called into question — sunlight allows the body to produce the vitamin.

Professor Ebers said: "Serious questions now arise over the wisdom of current advice to limit sun exposure and avoid sunbathing. We also need to give better advice and help to the public on vitamin D supplements, particularly pregnant and nursing mothers."

The news has momentous implications for Scotland and other northern countries, where the incidence of multiple sclerosis is the highest in the world. It will give added urgency to recent moves by Scotland's Chief Medical Officer to consider recommending vitamin D supplements.

Deficiency in vitamin D, caused by lack of exposure to sunshine, has been increasingly linked to the cloudier climate in Scotland and other northern latitudes. The deficiency is twice as common among the Scots as it is amongst the English — and Orkney and Shetland have among the highest rates.

Studies have also shown that fewer people with MS are born in November and more in May, implicating a lack of sunshine during pregnancy.

The breakthrough comes after a groundswell of expert belief in the importance of vitamin D. Last November, at a conference organised by the Scottish Government, international experts urged vitamin D supplements for Scots to be tested "sooner rather than later" to find whether they could improve the nation's health.

Researchers for the World Health Organisation said there should be large, randomised trials as there was strong evidence that increased daily intake of vitamin D could significantly improve health.

The seminar followed evidence, revealed in *The Times*, that Scotland's poor health record has close links to vitamin D deficiency. Last September this newspaper reported evidence from scientists in Canada that children with early symptoms of multiple sclerosis have low levels of vitamin D.

Until now there has been no scientific proof of the links. However, Professor Ebers and his team have shown that vitamin D affects a particular genetic variant, identified as the one that increases the risk of developing MS threefold.

They suggest that a shortage of the vitamin alters this variant, thus preventing the immune system from functioning normally.

Professor Ebers said: "Whether it's at the core of MS is going to take some further work, but it does look like a reasonably good chance."

Last October Professor Ebers, in an article in *The Times*, backed the idea of distributing vitamin D supplements in Scotland to guard against conditions that may be linked to a deficiency, including MS.

"It is plausible that some 200 cases a year of MS might be prevented in Scotland alone by giving vitamin D to mothers and children," he wrote.

"Over a trial duration of 25 years, 5,000 cases of this disease might be otherwise prevented.

"The economic impact of each person with MS is at least an extra million pounds during a lifetime.

"Over 25 years £5 billion is at issue in this disease without factoring in the human cost, the increasing rate of MS or inflation. A large-scale programme providing vitamin D could provide scientific evidence."

It's such a simple precaution

Case Study Ann Brown

The revelation that vitamin D supplements could prevent multiple sclerosis in future generations was greeted with delight by Ann Brown.

"It's brilliant news and the best thing is that it's so simple," she said.

Mrs Brown, 51, who has had the disease for 10 years, said she would encourage her daughters to take supplements of the 'sunshine' vitamin.

Her aunt suffered from MS and she acknowledged the possibilities of genetic links.

After Mrs Brown from Falkirk, had her first attack, tests were inconclusive and it was five years before she was given a diagnosis.

She said: "The drugs that were out then, there were tremendous side-effects and they were not going to cure anything. What is so good about this is the fact that taking vitamin D is not going to do you any harm.

"I would like to see the government as soon as possible recommend that everyone, and especially pregnant women, should take a daily supplement."

Tysabri Useful In Childhood MS

A German study has found that Tysabri is a rising second-line treatment for MS in children. Tysabri treatment, carried out at the Centre for in Childhood and Adolescents in Gottingen, went for between 15 months and two years, during which time no relapses occurred in three young patients, who had failed to respond to other disease modifying drugs. All three said there had been significant improvement in their quality of life. Follow-up MRI scans showed no new lesions.

Tysabri Take-Up Very Low

Only around one in 10 MS ; patients eligible for Tysabri is receiving the drug, according to government statistics. In a parliamentary answer it was revealed that between 100 and 300 people were getting Tysabri in March this year, out of a possible 2,000 who could benefit from it. It is believed that some delays may be due to the need to give the drug as an hour-long intravenous infusion, which means there must be a suitable place available. Source: guardian.co.uk 7/6/08

Tysabri - New Death Reported.

An American MS patient who developed a severe brain infection after taking Tysabri has died. The patient received 14 Tysabri infusions before being diagnosed with the brain illness progressive multifocal leukoencephalopathy or PML. The new death is the first among four cases of the brain illness reported since the drug was re-introduced in the U.S. in 2006. PML is included in Tysabri's prescribing information as a possible side effect in 1 of every 1,000 patients taking the drug.

Source: Bloomberg.com 7/9/08

One of the best

By Charles Spencer
Theatre Reviews

JUST as there are now large stations of bookshops devoted to misery memoirs about wretchedly unhappy childhoods, so in the late Seventies and early Eighties there was a brief fashion for plays about disability.

Whose Life is it Anyway? concerned a paraplegic, *Crystal Clear* dealt with the onset of blindness, *Children of a Lesser God* actually starred a profoundly deaf actress.

The most successful of them was Tom Kempinski's *Duet for One* about a brilliant concert violinist stricken by that cruellest of diseases, multiple sclerosis.

It opened on the fringe, transferred for a long West End run, moved on to Broadway and was later turned into a movie starring Julie Andrews and Max von Sydow.

I somehow managed to miss it in all these incarnations, and turned up at the Almeida expecting the worst. A night of manipulative, mawkish sentimentality seemed on the cards, from a dramatist who appeared to have made a theatrical killing by bumming a ride on the life of the great cellist Jacqueline du Pre.

In fact, *Duet for One* bowled me over. This is a noble and deeply moving piece of theatre, blessed with wit, insight and a refusal merely to wallow in misfortune and let the audience have a good cry.

The drama takes the form of six sessions between Stephanie Abrahams (Juliet Stevenson) - the brilliant violinist who, thanks to MS, can no longer play and is already in a wheelchair - and her German shrink Dr Feldmann (Henry Goodman), who shares her passionate love of music.

The play asks the big question, the one that has occupied the minds of so many tragic writers: how do you go on living when all hope has gone? Tom Kempinski is a wise enough writer to come up with no glib little capsule of truth and comfort. He also manages to make this dark subject matter dramatically compelling, as the skilled psychiatrist probes his patient's defences, breaks down her denial, and persuades her to feel the full pain of her predicament as the only way of moving forward.

It is like watching a game of cat and mouse with one big difference - the cat-psychiatrist desperately wants the suicidal mouse to live. I have sometimes accused Stevenson of overdoing the snot and tears during her more anguished performances but she is superb here. Her moods turn on a sixpence, from sardonic wit to tumultuous anger, from bright false hope to raw pain.

There isn't a single moment that feels false or overplayed, and the performance is all the more powerful for its restraint and palpable intelligence. Henry Goodman, like most shrinks, has little to say, but he creates a highly sympathetic, wise and comic character out of almost nothing.

However, watching these two perform together is much more than a masterclass in fine acting. In Matthew Lloyd's rich and nuanced production, punctuated by sublime passages from Bach's violin sonatas, Kempinski's play touches on something profound about what Wordsworth described as the still sad music of humanity.

DISCLAIMER

Articles in this Bulletin are meant for the sole purpose of information only and do not necessarily reflect the views of the committee.

YOUR JOKES

Old age

I've sure gotten old!
 I've had two bypass surgeries, a hip replacement,
 New knees, fought prostate cancer and diabetes
 I'm half blind,
 Can't hear anything quieter than a jet engine,
 Take 40 different medications that
 Make me dizzy, winded, and subject to blackouts.
 Have bouts with dementia ..
 Have poor circulation;
 Hardly feel my hands and feet anymore.
 Can't remember if I'm 85 or 92.
 Have lost all my friends. But, thank God,

I still have my driver's license!!

Just before the funeral services, the undertaker
 came up to the very elderly widow and asked,
 'How old was your husband?' '98,' she replied.
 'Two years older than me'
 'So you're 96,' the undertaker commented.
 She responded,

'Hardly worth going home, is it?

Know how to prevent sagging?

Just eat till the wrinkles fill out.

My memory's not as sharp as it used to be.

Also, my memory's not as sharp as it used to be.

These days about half the stuff
 In my shopping cart says,

'For fast relief.'

Reporters interviewing a 104-year-old
 woman:

'And what do you think is the best thing
 About being 104?' the reporter asked.

She simply replied, 'No peer pressure.'

The nice thing about being senile is

You can hide your own Easter eggs.

It's scary when you start making the same
 noises

As your coffee maker.

A study conducted by UCLA's Department of Psychiatry has revealed that the kind of face a woman finds attractive on a man can differ depending on where she is in her menstrual cycle.

For example: If she is ovulating, she is attracted to men with rugged and masculine features.

However, if she is menstruating, or menopausal, she tends to be more attracted to a man with duct tape over his mouth and a spear lodged in his chest while he's on fire.

No further studies are expected.

MEMBERS COMPETITION

A £5 prize will be given to the member whose entry has the most correct answers. Even if you can't answer all the questions, send in those you have answered – you could still win!

USING ONE OF THE INITIAL LETTERS FROM EACH ANSWER WILL GIVE YOU THE NAME OF A LOCAL TOWN OR VILLAGE

- 1/ One of the Great Lakes
- 2/ Capital of Mongolia
- 3/ Which insect has both a King and Queen
- 4/ Name of the fairy in Peter Pan
- 5/ Which herb is used to flavour the sauce in Pizzas
- 6/ Most abundant gas in our atmosphere
- 7/ One of the rooms in Cluedo
- 8/ First woman to make a solo transatlantic flight
- 9/ Topaz is the birthstone of which month
- 10/ Chess piece
- 11/ In which city was John Lennon murdered

Name:

Address:

Send Completed Forms To:
Mr D Henderson
74 Windermere Road
Stockton-on-Tees
TS18 4LY

All entries to be received by the next social. The winner will be drawn from entries received with the highest number of correct answers.

Answers to last quiz:

1/Topaz 2/Hall 3/Ounce 4/Richard Nixon 5/Pandora 6/ Eddy Stone 7/Leslie Thomas 8/Aorta 9/Rockefeller 10/Comanche 11/Hepburn (Audrey) 12/Earth 13/Sioux