

By **LYNNE WALLIS**

WHEN Christopher Lane killed himself four years ago, his family's grief and shock was suffused with utter bewilderment. The good-looking and bright 31-year-old seemed to have everything to live for.

The break-up of Chris's relationship with his girlfriend five years before had hit him hard, but he had a loving family, a good job as a computer program writer and there had been no obvious signs that something was wrong.

Two days after his death, his devastated mother Joanna Lane found letters her son had written to his ex-girlfriend. In one he said he was worried his 'little man' wasn't working properly. Joanna began to wonder if his suicide was linked to impotence, a common cause of depression in men.

His parents didn't know then, but Christopher had suffered bouts of mild depression from his teens onwards. Joanna, a retired English language teacher, had wondered if the head injury her son suffered after falling out of a tree aged seven had affected him mentally, as he sometimes seemed out of sorts.

The week after his death, Joanna's sister Caroline looked on the internet for possible links. She came across research suggesting a third of traumatic brain injury survivors suffer damage to the pituitary gland, which can cause hormonal problems including impotence, depression, low libido, infertility and fatigue.

Even more distressing was the discovery that this damage can be effectively treated with hormone replacement.

'I now know Chris had counselling in the years before his death where he talked about his sexual problems and his depression,' says Joanna. 'I only wish he had discussed it with a doctor. It may have saved his life.'

Chris's tragic story is by no means an isolated case. Experts are warning that hundreds of thousands of people may be living with the effects of post-traumatic hypopituitarism (PTHP) — damage to the pituitary gland — as a result of a head injury.

The pea-sized pituitary gland is attached to the brain by a slender stalk. It is known as the 'master gland' as it controls the thyroid and the adrenal glands, and is responsible for our metabolism, stress and growth hormones, and the male sex hormone testosterone.

DAMAGE to the gland can occur if the blood vessels which run through the stalk are broken or squeezed by swelling of the brain, or when the brain is starved of oxygen.

A million people suffer head injuries every year in the UK and 10 per cent of these are serious. The Pituitary Foundation charity estimates 25 to 30 per cent of people with serious head injuries sustain pituitary damage.

However some experts warn many more might be affected — up to 100,000 because they say pituitary damage can be sustained from a bang to the forehead or back of the head, or even whiplash.

Depressed? Always tired? It could all be down to a childhood bump on your head

One man's shocking story reveals risk many doctors don't know about

And it can be years after the initial injury before a person starts to show symptoms.

'Too many people are falling under the radar and their PTHP is not being diagnosed,' says Tony Belli, a trauma neurosurgeon at the Queen Elizabeth Hospital in Birmingham. 'The signs of PTHP aren't widely recognised, but sexual dysfunction is common, with around 16 per cent suffering from impotence.'

Knowing this now, Joanna is haunted by memories of the Sunday in 1984 when Chris hurt his head.

She, her husband John, an IT consultant, and their three children (Chris and his two sisters) had visited a children's farm and Chris ran off to the playground.

'A stranger came to tell us he had fallen out of a tree, and when we found Chris he was lying motionless with blood coming out of his ear.'

'If the nurse who happened to be around hadn't cleared the blood from his throat, he would have choked to death. In retrospect, I sometimes think that might have been preferable to what he went through.'

Paramedics took Chris to A&E and then a specialist head injury unit in London where he lay in a coma for five days, with a fractured skull. 'The fracture was actually good because it released the pressure on his brain which swelled during the trauma,' says Joanna.

'We talked and sang to him, as recommended, and eventually we heard the words: "Can you all stop singing those stupid songs?" — and Chris had come back to us. He

seemed the same as always, although one of his sisters said he had become "meaner" after the accident. I didn't agree. Half of his face was partially paralysed, but this disappeared after six months. No one ever warned us there might be long-term damage.'

But during his teens, Chris struggled. Having been top of his class at primary school, at secondary school he slipped to average. 'He often remarked as he got older that inside he felt differently from the jokester exterior he sometimes managed to pull off.'

During his A-levels he disappeared for two days. 'He went to a youth hostel on the South Coast. He told us later he felt under so much pressure he needed to escape.'

Coping poorly with stress can be a sign of pituitary gland damage.

'He was always one of those young men who went out in a T-shirt and could take a lot of cold. I thought he was being macho, but we now know that not feeling cold is also typical among people with PTHP.'

Chris went to university to study structural engineering and German, but never completed his degree — something Joanna now puts down to depression.

She says: 'He had a full life — he had a lovely girlfriend — and seemed to be OK, we thought then. I wish I had been a more observant mother, I might then have picked up that something really wasn't right.'

Following Chris's death, his former girlfriend confirmed to Joanna that Chris had been very depressed and that they had never had full sex as he was impotent.

It is 'very likely' Chris had pituitary gland damage, says neurosurgeon Tony Belli.

In recognition of the dangers of the condition, in 2009 the Army began screening soldiers who'd sustained serious head injuries. Meanwhile, the Football Association is re-considering its screening policy on head injuries to include pituitary damage. But experts believe this screening should be extended to everyone.

In a 2005 study published in *Brain Injury*, the journal of the International Brain Injury Association, 11 specialists recommended screening for PTHP after moderate-to-severe brain injury.

In 2009, a group of leading Spanish endocrinologists made a

similar appeal. 'I would like to see head injury patients who aren't feeling 100 per cent to be screened three months after the trauma,' says Mr Belli.

CERTAINLY if a head injury patient suffers from lethargy and tiredness as a result of depression, they should be checked for pituitary gland damage, adds Dr John Newell-Price, a reader in endocrinology at Sheffield University.

A one-off screening might not be enough, says Dr Joanne Blair, an endocrinologist at Alder Hey Children's Hospital in Liverpool. 'Loss of function can occur over time, sometimes decades later,' she says, suggesting regular monitoring instead.

The test takes a few days. Blood and urine tests are taken to determine pituitary gland damage by measuring hormone levels, and then an assessment made of the patient, with questions about depression and sexual dysfunction.

Alarming, it might not take much to trigger PTHP. Dr Blair says to damage the pituitary gland a head injury would have to be serious enough to make a person lose consciousness — even just for a moment.

'People are surprised to know it can happen from a simple bang on the head

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Trauma: Christopher before his fall and, inset, in his 20s

during rugby or football, or falling out of a tree,' she adds.

Dr Newell-Price says: 'It is my belief the more severe the head injury, the greater the chance of damage to the gland. However, we know whiplash can severely damage the pituitary gland, as the sudden movement can sever the stalk so the gland is disconnected from the brain.'

Indeed, a 2009 study found that pituitary gland damage can be sustained by a minor cranial trauma without even having lost consciousness. As Mr Belli suggests: 'Mild head injury is ten times more common than severe, and we could, therefore, be looking at as many as 100,000 people a year having PTHP, most of whom will be undiagnosed.'

'The costs to society are vast for those with PTHP: they often stop going to work and their relationships break down — divorce among all head injury cases is 60 per cent.'

The brain injury charity Headway has recently applied to the Government health watchdog NICE to recognise the condition. It has yet to hear back.

The good news is once the condition is spotted, treatment is straightforward — a patient can have hormone replacement medication.

However, the more time that has elapsed between the head injury and PTHP, the more likely it is the patient will be on medication for life.

One of those who has benefited from

prompt treatment is James, a 38-year-old former television company manager from Surrey.

James (not his real name) suffered pituitary gland damage after he was set upon by a gang of men who robbed and seriously assaulted him in October 2007. As well as broken ribs and almost losing an eye, he suffered several blows to the head and lost consciousness for four days. He was in hospital for two weeks.

'The first six months passed in a bit of a blur,' he says. 'After that, I began to feel really awful. I couldn't get up, I couldn't sleep and I had trouble communicating.'

'I stopped going into work because I couldn't face it. I became fearful of pretty much everyone and everything. I had no idea what was wrong.'

James cut contact with friends and his partner (they have since reunited and have a one-year-old baby). And after two months of continual negative thoughts James made an attempt on his own life, trying again twice more over the next three and a half years.

He had been attending monthly hospital appointments after the attack for psychiatric support and blood tests, and it was during one of these tests that a doctor picked up that James's testosterone levels were very low.

An endocrinologist discovered his pituitary gland was 'virtually dead' as a result of PTHP. 'That's why I'd felt so tired and depressed,' says James. 'I began taking hormone replacement and felt better almost immediately.'

'Life is a lot better, but I still haven't returned to work. I've gone from someone who presented a 40-page document to shareholders, to a guy who can't remember to shut the fridge door.'

'I'll probably be on the hormones for life. But if I hadn't received help, I'd be no further forward and probably — I hate to say it — dead.'

■ *FOR more information, visit pituitary.org.uk and headway.org.uk.*