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Stem cells treat paralysis for the first time ever

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Singapore: StemCells, a company based in California, US, has for the first time in history of the world developed a treatment that has enabled the reversing of paralysis in three patients. The results of the treatment were presented by Dr Armin Curt of Balgrist University Hospital in Zurich (the hospital where the three patients were treated), Switzerland, at the annual meeting of the International Spinal Cord Society.

These people, who were paralysed from the chest down, received injections of neural stem cells into their spinal cord. The cells were acquired from donated fetal brain tissue and were injected between four and eight months after injury, with a temporary course of immunosuppressants. None of the three patients felt any sensation below their nipples, however, six months after therapy, two of them had sensations between their chest and belly button. The third person has not felt any change yet.

Dr Stephen Huhn of StemCells, said that, "The fact we've seen responses to light touch, heat and electrical impulses so far down in two of the patients is very unexpected. They're really close to normal in those areas now in their sensitivity."

Dr Huhn hopes that the results will revive the enthusiasm that evaporated following last year's suspension of the only other trial to test stem cells for spinal injury. "It is the first time we've seen some beneficial effect, so we're moving in the right direction," he says.

There could be several reasons why stem cells improve sensitivity. They might restore myelin insulation in damaged nerves, improving communication to and from the brain. Or they could be enhancing the function of existing nerves, replacing them entirely or reducing the inflammation that hampers repair.