DiPALS: Diaphragm Pacing in patients with Amyotrophic Lateral Sclerosis – a randomised controlled trial

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The research study aimed to compare two different treatments [non-invasive ventilation alone or non-invasive ventilation given alongside diaphragm pacing (DP)] for patients experiencing breathing difficulties due to amyotrophic lateral sclerosis (ALS). ALS is another name for motor neurone disease. Non-invasive ventilation is the treatment patients usually get where they wear a face mask and air is pushed into the lungs to help breathing. DP is a possible alternative treatment in which wires are inserted into the main breathing muscle to stimulate it directly to help patients breathe. The main outcomes of the study were to see if the addition of DP improved patient survival (how long patients lived) and improved quality of life.

We conducted our research in seven UK hospitals and enrolled 74 patients to the study (37 patients in each treatment group). Patients were enrolled between December 2011 and December 2013. The study stopped early based on recommendations from the committee charged with guarding patient safety. The committee felt that DP might be causing harm to patients. Patients in the group given DP alongside standard treatment had worse average survival (11.0 months) than those in the standard treatment only (non-invasive ventilation) group (22.5 months).

Based on study results, DP should not be used as routine treatment in ALS patients with breathing problems.
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