

- Title** Continuous Intrathecal Baclofen (ITB) Infusion for severe spasticity and dystonia
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**Aim**

To assess the safety, effectiveness, cost-effectiveness, organizational issues related to the use of continuous ITB infusion for treatment of patients with severe spasticity or severe dystonia or having both conditions compared with conventional treatment.

**Conclusions and results**

There was a good level of evidence on effectiveness (with There was substantial fair level of retrievable evidence to suggest that continuous ITB infusion was effective in reducing spasticity, reducing pain, improved function and quality of life in patients with severe spasticity who were unresponsive or cannot tolerate oral baclofen. Majority of the treatment goals were attained. Patients and caregivers were satisfied with the treatment. Although there was the risk of adverse events related to continuous ITB infusion, the treatment is considered relatively safe, minimally invasive and reversible. Continuous ITB infusion for treatment of patients with severe spasticity seemed to be cost-effective in some countries.

There was limited fair level of retrievable evidence to suggest that continuous ITB infusion was also safe and effective in reducing dystonia, reducing spasticity, improved function and quality of life in patients with severe dystonia or having both spasticity and dystonia who were unresponsive or cannot tolerate oral baclofen. Complication rates were higher in children with dystonia compared with those having spasticity. There was no retrievable evidence on the cost-effectiveness of continuous ITB infusion for treatment of patients with severe dystonia or having both spasticity and dystonia.

This treatment system requires long term monitoring by an experienced healthcare team. Besides proper training for the healthcare teams, patients and caregivers education has been critical in avoiding severe consequences of ITB withdrawal. Despite the large upfront cost for the procedure, the long-term effects can be potentially money saving.

**Recommendations (if any)**

Continuous ITB infusion may be utilised in patients with severe spasticity or severe dystonia or having both

conditions who are unresponsive or cannot tolerate oral baclofen, by trained multidisciplinary healthcare teams.

Criteria for patient selection should be developed. Records of patients on continuous ITB infusion should be maintained by the treating physicians. Patient's outcome research is warranted on a long term basis.

**Methods**

Studies were identified by searching electronic databases. The following databases were searched through the Ovid interface: MEDLINE(R) In-process and other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to present. EBM Reviews-Cochrane Database of Systematic Reviews (2005 to June 2014), EBM Reviews-Cochrane Central Register of Controlled Trials (July 2014), EBM Reviews – Database of Abstracts of Review of Effects (3<sup>rd</sup> Quarter 2014), EBM Reviews-Health Technology Assessment (3<sup>rd</sup> Quarter 2014), EBM Reviews-NHS Economic Evaluation Database (3<sup>rd</sup> Quarter 2014). Parallel searches were run in PubMed. No limits were applied to the search. The last search was run on 27 June 2014. Additional articles were identified from reviewing the references of retrieved articles. Studies were selected based on inclusion and exclusion criteria. All relevant literature was appraised using the Critical Appraisal Skills Programme (CASP) tool. All full text articles were graded based on guidelines from the U.S./Canadian Preventive Services Task Force.

**Further research/reviews required****Written by**

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