HAUTE AUTORITÉ DE SANTÉ

NEONATOLOGY
Clarification
September 2014

BRIEF SUMMARY OF THE TRANSPARENCY COMMITTEE OPINION

CUROSURF (poractant alfa), pulmonary surfactant

Substantial clinical added value in patients with respiratory distress syndrome due to pulmonary surfactant deficiency

- not breathing spontaneously at birth and requiring immediate intubation,

- breathing spontaneously at birth but not or no longer responding to continuous positive airway pressure (CPAP) and requiring intubation for stabilisation.

Main points

- CUROSURF has Marketing Authorisation in the treatment of premature infants presenting or at high risk of presenting respiratory distress syndrome (RDS) caused by pulmonary surfactant deficiency (hyaline membrane disease).
- In light of the available clinical data and recent advances in the management of RDS with antenatal corticosteroid therapy and less invasive routine methods, CUROSURF may be proposed for premature infants:
  - breathing spontaneously at birth but no longer responding to CPAP and requiring intubation,
  - not breathing spontaneously at birth and requiring intubation.
- The value of systematic prophylactic treatment with a surfactant is no longer apparent.

Therapeutic use

The treatment of premature infants relies on maintaining adequate gas exchange, optimised nutrition, and ensuring thermal and cardiovascular homoeostasis, with the use of vasopressors if necessary. The aim of respiratory management is to improve gas exchange.

- *Prophylactic treatment*

Prevention of respiratory distress syndromes relies on prompt multidisciplinary management, involving both obstetricians and neonatal paediatricians.
Preventive treatment of hyaline membrane disease relies on preventing severe prematurity and on antenatal corticosteroid therapy. Administration of a dose of corticosteroids is recommended in all pregnant women between weeks 23 and 34 if they present a high risk of premature delivery (threat of an extremely preterm infant).

- *Curative treatment*

In premature infants breathing spontaneously but requiring respiratory support, the essential and routine treatments are still controlled oxygen therapy and stabilisation of the functional residual capacity (FRC) of the lungs by continuous (CPAP) or intermittent positive airway pressure ventilation, which should be started promptly. These methods help maintain sufficient lung volume, lowered total airway resistance, and improved pulmonary compliance, respiratory rate, tidal volume and minute volume. In the event of failure, which manifests itself in clinical worsening and hypercapnia (> 60 mmHg), intubation and artificial ventilation are necessary, combined with local administration of a surfactant.

In newborn infants not breathing spontaneously, treatment relies on endotracheal intubation coupled to a continuous mechanical ventilation system, together with prompt administration of a surfactant.
The patient should be extubated as soon as possible to reduce the risks of bronchopulmonary dysplasia.

Role of the medicinal product in the therapeutic strategy

Under current healthcare recommendations, which rely in particular on treating high-risk pregnancies with antenatal corticosteroid therapy and stabilising newborn infants with RDS by CPAP, there is no longer any proven benefit in routine prophylactic treatment with a surfactant.

CUROSURF, the only surfactant currently marketed in France, can be proposed for premature infants breathing spontaneously at birth but no longer responding to CPAP and requiring intubation for purposes of stabilisation, or not breathing spontaneously at birth and requiring immediate intubation.

Clinical data

The value was shown of early curative administration of a surfactant compared with delayed administration, but not in the context of routine prophylactic administration.
Under current healthcare recommendations, which rely particularly on treating mothers with antenatal corticosteroid therapy and stabilising newborn infants with RDS by CPAP, there is no longer any proven benefit in routine prophylactic surfactant treatment. On the other hand, when intubation for assisted ventilation is necessary, treatment should be started promptly.
There are no long-term data available on the reduction in respiratory and neurological after-effects.
Rarely reported adverse effects are: pulmonary haemorrhage, haemodynamic disturbances (bradycardia, hypotension, intracranial bleeding), and transient desaturation. In the context of premature birth and respiratory distress, the causal link between CUROSURF and these events has not yet been established.

Special prescribing conditions

Medicine for hospital prescription
Prescription medicine reserved for certain specialists (prescription reserved for neonatal intensive care units)

Benefit of the medicinal product

- The actual benefit* of CUROSURF is substantial.
- In the treatment of premature infants presenting respiratory distress syndrome due to pulmonary surfactant deficiency (hyaline membrane disease), not breathing spontaneously at birth and requiring immediate intubation, or breathing spontaneously at birth but not or no longer responding to continuous positive airway pressure (CPAP) and requiring intubation for purposes of stabilisation, CUROSURF provides a substantial clinical added value** (CAV II) in the treatment of these patients.

  Recommends continued inclusion on the list of reimbursable products for hospital use.

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* The actual benefit (AB) of a proprietary medicinal product describes its benefit primarily in terms of its clinical efficacy and the seriousness of the condition being treated. The HAS Transparency Committee assesses the AB, which can be substantial, moderate, low or insufficient for reimbursement by the National Health Insurance.

** The clinical added value (CAV) describes the improvement in treatment afforded by a medicinal product compared with existing treatments. The HAS Transparency Committee assesses the degree of CAV on a scale from I (major) to IV (minor). A level V CAV means “no clinical added value”.