HAUTE AUTORITÉ DE SANTÉ

OPHTHALMOLOGY
Update
October 2018

TRANSPARENCY COMMITTEE OPINION SUMMARY

SKIACOL (cyclopentolate), antocholinergic eye drops

High clinical benefit in cycloplegia before refraction measurements, but no demonstrated clinical advantage in the therapeutic strategy

Insufficient clinical benefit to justify reimbursement in the other indications due to the absence of role in the therapeutic strategy

Main points

- SKIACOL has been granted an MA in adults and children ≥ 1 year for cycloplegia and mydriasis before refraction measurements, diagnosis of post-surgical esotropia and preoperative dilation for cataract or photocoagulation.
- Its use is established and recommended in cycloplegia before refraction measurements.
- Its administration regimen is simpler and less restrictive than that of atropine to achieve cycloplegia.
- The impact on morbidity and mortality and on quality of life has not as yet been demonstrated due to the lack of clinical data.
- Considering its more frequent adverse effects compared to other mydriatic eye drops, SKIACOL has no role in the therapeutic strategy for achieving mydriasis prior to refraction measurements, post-surgical esotropia diagnosis and achievement of preoperative dilation for cataract and photocoagulation.

Therapeutic strategies

- Two types of eye drops are currently used in ophthalmology to achieve pupil dilation or cycloplegia: atropine-like eye drops and derivatives (atropine, cyclopentolate, tropicamide and homatropine), along with alpha-mimetics represented by phenylephrine. Only two of these eye drops are indicated for achieving effective cycloplegia: atropine at an age-related concentration (reimbursable medicine) and 0.5% cyclopentolate (non-reimbursable medicine). The other atropine-like eye drops are primarily mydriatic, with partial accommodation quiescing.
- For pupil dilation, tropicamide is the recommended examination eye drop due to its tolerance profile, mydriatic effect speed and short-lasting action. In the event of insufficient dilation, or for certain patient groups (premature infants, diabetic and elderly patients), a second mydriatic eye drop, such as atropine, cyclopentolate or phenylephrine, depending on the patient's age, must be used in combination.
- To achieve cycloplegia, the use of cyclopentolate is recommended, with a measurement of refraction between 45 and 60 minutes after first instillation. This product is contraindicated in children under the age of 1 year and in the event of known or suspected angle-closure glaucoma. For more complete cycloplegia, or if cyclopentolate is insufficient (in particular melanoderm children with a very dark iris) or contraindicated, the use of atropine is recommended, at a concentration adapted to the child's age (for 5 to 7 days before the measurement). Overall, the preferred routine choice is cyclopentolate (SKIACOL). The choice between cyclopentolate and atropine must take the examination circumstances into consideration. Some clinical situations require, at a least, an assessment with atropine, particularly in young children whose accommodation power is major and in adults, in the event of recalcitrant accommodative spasm, especially before any surgical decision.
- For preoperative dilation, various dilation protocols, combining primarily two mydriatic agents (phenylephrine and tropicamide), are available.
- Best practices for mydriatic eye drops in paediatrics, as defined in the MAs, must be observed to limit their systemic transition.
- **Role of the medicinal product in the therapeutic strategy**

SKIACOL is a first-line treatment for achieving cycloplegia before refraction measurements, particularly for the paediatric population.
Considering its more frequent adverse effects relative to other mydriatic eye drops, in particular relative to tropicamide, SKIACOL has no role in the therapeutic strategy for achieving mydriasis before refraction measurements, for the diagnosis of post-surgical esotropia or for achieving preoperative dilation for cataract or photocoagulation.
SKIACOL is contraindicated in children under the age of one year.

Clinical data

- No new clinical studies have been conducted to assess the efficacy and tolerance of cyclopentolate.
- To date, there are no comparative data documenting the efficacy of cyclopentolate relative to atropine in cycloplegia and relative to mydriatic eye drops for achieving mydriasis. Its use is nevertheless established and recommended by learned ophthalmology societies, particularly for achieving cycloplegia.
- Mydriatic eye drops, including cyclopentolate, were the subject of a national pharmacovigilance investigation, giving rise to best practices recommendations issued several times by ANSM to reduce their systemic transition.
- The systemic adverse effects of mydriatic eye drops have mainly been reported in children and elderly subjects. They are primarily neurological and psychiatric. Other signs of atropine impregnation are frequent, such as facial redness, urinary disorders (particularly in elderly subjects), fever in children and digestive disorders, particularly abdominal distension, intestinal obstruction and occlusions in neonates or premature infants.

Benefit of the medicinal product

- The actual clinical benefit* of SKIACOL is high only in cycloplegia before refraction measurements.
- SKIACOL does not provide any improvement in actual clinical benefit** (IACB V) in the therapeutic strategy.
- Approved for non-hospital pharmacy reimbursement and for hospital management only in cycloplegia before refraction measurements.

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This document was drafted on the basis of the Transparency Committee opinion dated 17 October 2018 (CT-15783) available at **www.has-sante.fr**

* The actual clinical benefit (ACB) of a medicinal product consists of its benefit particularly on the basis of its clinical performances and the severity of the disease treated. The HAS Transparency Committee assesses the ACB, which may be high, moderate, low, or insufficient for the medicinal product to be covered by public funding.

** The improvement in actual clinical benefit (IACB) consists of the clinical improvement offered by a medicinal product compared to existing treatments. The HAS Transparency Committee assesses the IACB rating from I, major, to IV, minor. An IACB rating of V (equivalent to "no IACB") denotes a "lack of clinical improvement"