Paediatric Sleep Medicine Clinical Network

NZCYCN New Zealand Child & Youth Clinical Network

Paediatric Society New Zealand

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Dear Geraldine

Re Proposal to fund Melatonin 2mg modified – release tablets (Circadin) for children and adolescents up to the age of 18 years with neurodevelopmental disorders

We are writing to give feedback on the proposal for melatonin 2mg modified release tablets to be funded from 1 July 2017 for secondary insomnia in children and adolescents with neurodevelopmental disorders.

We note that the proposal is almost identical to that put forward 3 years ago. The Paediatric Society of New Zealand wrote a response at that time detailing a number of issues with the proposal:

- Inappropriateness of the preparation for children with neurodevelopmental disorders
- Inflexibility around dose adjustment
- Limitation of age restriction up to 18 years

The PSNZ feedback also suggested consideration of extension of the proposal for children with visual impairment and raised the question of extension to a much larger population of children without learning difficulties who have primary sleep disorders or delayed sleep-phase syndrome.

Over the last 3-5 years we have seen Melatonin increasingly being prescribed by general practitioners and paediatricians to facilitate sleep in the general paediatric population. It is frequently perceived by health care professionals and parents as a safe “natural hormone” rather than a “real” drug. Health professionals also vary in their thresholds for use of melatonin, dose, timing and duration of prescribing. While we fully support a proposal by PHARMAC to fund Melatonin with limitations of use in children with neurodevelopmental disorders, we feel strongly that the previous issues raised by the PSNZ are not adequately addressed in this new proposal.

Inappropriateness of the preparation for children with neurodevelopmental disorders
All children are entitled to age appropriate medicines. Only approving a modified release tablet with the advice of crushing and/or mixing with soft food if the child has difficulty swallowing tablets, is giving the wrong message on the need for accuracy and indeed safety of this drug. As the proposal states it is even noted that this is not recommended on the datasheet. Parents surfing the internet and reading the information available are likely to get

conflicting information on effectiveness of this route and the recommendation. As highlighted by the PSNZ previously this method of administration also runs the risk of PEG tube blockages in children whose oral intake is dependent on these.

Inflexibility around dose adjustment
It is important to acknowledge that all the suggested exogenous treatment regimens are vastly in excess of physiological levels (mean daily endogenous production 28.8mcg/day in adults). Only the lowest dose to achieve the desired effect should be advised. Doses as small as 0.5mg are effective in children which points to the inflexibility of the 2mg tablet. The most commonly utilised doses would be between 1-3mg. We support the limit of 6mg as there is little additional benefit seen with doses over 6mg.

We ask PHARMAC to consider having an immediate release form in doses of 1mg or 2mg tablets as well as a liquid preparation available for those children who require this. The immediate form has less potential for causing daytime somnolence and is more physiologically appropriate for the desired hypnotic effect.

Limitation of age restriction up to 18 years
Not uncommonly adolescents with neurodevelopmental disorders remain under the care of paediatricians or developmental paediatricians until they leave school which may be older than 18 years. We suggest that consideration be given to extend the age to 21 years in keeping with the recently introduced age limits for Oranga Tamariki.

Extend the approval to include children with secondary insomnia and visual impairment
There is strong evidence that melatonin to be effective and helpful in children with secondary insomnia and visual impairment. We would welcome extension of the proposal to include children with secondary insomnia and visual impairment.

Add to the special authority requirements for the initial application and renewal that the child does not have a history of sleep-disordered breathing or other primary sleep disorder, or if there is a history of a primary sleep disorder this has been adequately investigated and/or treated.

Finally as paediatricians and paediatric sleep medicine specialists we welcome a note of caution in PHARMACs proposal to only fund melatonin for children with neurodevelopmental disorders. We also feel that there has been a gradual creep in practice to using melatonin before adequately excluding other causes of difficulty falling asleep and/ or maintaining sleep which may be due to a variety of sleep issues and sleep disorders. Melatonin should only be considered following first line treatment by attention to good sleep habits and trial of appropriately implemented behavioral sleep measures. We advocate that a sleep problem in any child with or without neurodevelopmental problems should always be approached with a thorough sleep and medical history and a careful physical examination. We strongly support follow-up and review of prescriptions 6-12 monthly due to the lack of studies on the potential side effects of prolonged usage in children. Ideally Melatonin should be discontinued for 1 week every 12 months after a normal sleep cycle is established to assess ongoing need for therapy.

If the history suggests an underlying sleep disorder (e.g. obstructive sleep apnoea or restless legs), or the difficulty with sleep persists, referral to a paediatrician or paediatric sleep medicine service is indicated (***https://www.starship.org.nz/for-health-professionals/new-zealand-child-and-youth-clinical-networks/paediatric-sleep-medicine-clinical-network/***).

In the future if Melatonin was to be funded to support management of sleep difficulties in children who do not have neurodevelopmental conditions, then we suggest that the special

authority may only be completed after discussion with a specialist paediatrician. This allows for dialogue around a thorough sleep and medical history, diagnosis and management of other sleep issues.

In summary, the paediatric sleep medicine clinical network would like PHARMAC to consider the following:

1. Funding of an immediate release product under special authority for children with neurodevelopmental conditions
2. Extend the approval to include children with secondary insomnia and visual impairment
3. Extend the approval of melatonin up to the age of 21 years
4. Add to the special authority requirements for the initial application and renewal that the child does not have a history of sleep-disordered breathing or other primary sleep disorder, or if there is a history of a primary sleep disorder this has been adequately investigated and/or treated

We look forward to discussing this feedback further with you.

Yours sincerely

Dr Elizabeth Edwards
Chairperson
New Zealand Paediatric Sleep Medicine Clinical Network

<u>This letter includes comments from the following members of the Clinical Network:</u>
Professor Dawn Elder,
Dr Sarah Currie, HBDHB
Dr David McNamara, ADHD

References

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