AWMSG Secretariat Assessment Report – Limited submission

Cefuroxime (Aprokam®) 50 mg powder for solution for injection

Company: Thea Pharmaceuticals Ltd

Licensed indication under consideration: Antibiotic prophylaxis of postoperative endophthalmitis after cataract surgery.

Marketing authorisation date: 8 October 2012

Comparator(s)

Unlicensed cefuroxime in pre-filled syringes.

Limited submission details

- Use of intracameral cefuroxime for the indication under consideration is recognised as established practice and is recommended in clinical guidelines. Aprokam® is the first licensed cefuroxime product for the prophylaxis of postoperative endophthalmitis after cataract surgery.
- Anticipated usage in NHS Wales is considered to have minimal budgetary impact.

Clinical effectiveness

- Aprokam® is available as a 50 mg powder for solution for injection which is reconstituted with 5 ml of solvent. The recommended dose is 0.1 ml of reconstituted solution. The vial is for single use only and one vial is used for one patient only.
- Results from a large randomised, placebo-controlled, multinational clinical study in approximately 16,000 people demonstrated a clinical benefit with a five-fold reduction ($p < 0.005$) in postoperative endophthalmitis rates in patients who received intracameral cefuroxime injection at the close of surgery. Although the confidence intervals were large (95% CI 1.87 to 12.9) and the study has limitations which makes the estimation of the size of the risk reduction of postoperative endophthalmitis uncertain, these outcomes are supported by other studies. These include two Swedish prospective studies which showed that the use of intracameral cefuroxime reduced the risk of postoperative endophthalmitis by 3.6 (95% CI 2.29 to 5.81; $p < 0.001$) and 7.2 fold (95% CI 3.71 to 14.11; $p < 0.001$).
- There was no specific information provided on the safety of cefuroxime and the rate of adverse events in the pivotal study and the two Swedish prospective studies, however, the safety population is very large and considered reassuring. There are limited dedicated data on adverse event reporting and there is a lack of data in patients under 18 years, although the Medicines and Healthcare products Regulatory Agency consider these points to be addressed in the summary of product characteristics and risk management plan. No particular adverse events were reported in the literature when cefuroxime is administered as an intraocular injection except for the risk of anaphylactic reactions (< 1/10,000).
- In the absence of a licensed cefuroxime product, clinicians have a choice of using unlicensed prefilled syringes available from specials manufacturers or off-label preparation of cefuroxime for which multiple dilutions are required. Several studies

have reported dilution errors and contamination with off-label preparation of cefuroxime, resulting in overdose and serious adverse events. Clinical expert opinion sought by AWTTC indicated an unmet need for the indication under consideration.

- The use of intracameral cefuroxime is included in UK (The Royal College of Ophthalmologists Cataract Surgery Guidelines September 2010) and European cataract surgery guidelines (ESCRS Guidelines for Prevention and Treatment of Endophthalmitis Following Cataract Surgery 2013). The National Institute for Health and Care Excellence is developing guidelines for the management of cataracts in adults, with an expected publication date of October 2017.

Budget impact

- The company estimates that there are 18,341 patients in Wales eligible for cefuroxime in year one, based on the number of cataract surgeries performed in Wales (2015–2016). The company estimates that the number of eligible patients will increase to 20,246 in year five.
- The budget impact analysis is based on cefuroxime (Aprokam®) displacing unlicensed pre-filled syringes of cefuroxime produced by specials manufacturers. [Commercial in confidence information removed]. Cost estimates for Aprokam® and pre-filled cefuroxime syringes are based on the medicine acquisition costs only. The administration costs have not been considered.
- The company estimates that the introduction of Aprokam® will result in savings of £1,926 in year one, rising to savings of £9,718 in year five based on the displacement of unlicensed pre-filled syringes.
- The budget impact is based on there being no current usage of off-label preparation of cefuroxime. There is some uncertainty whether this is reflective of current practice in Wales which could result in a positive budget impact.

Additional information

- AWTTC is of the opinion that, if recommended, cefuroxime (Aprokam®) is appropriate for specialist only prescribing within NHS Wales for the indication under consideration.

Evidence search

Date of evidence search: 10 March 2017.
Date of range of evidence search: No date limits were applied to database searches.

Further information

This assessment report will be considered for review every three years.

References are available on request. Please email AWTTC at AWTTC@Wales.nhs.uk for further information.

This report should be cited as: All Wales Therapeutics and Toxicology Centre. AWMSG Secretariat Assessment Report. Cefuroxime (Aprokam®) 50 mg powder for solution for injection. Reference number: 2224. July 2017.