South East London Area Prescribing Committee
Formulary recommendation

Reference:	**069**
Intervention:	**Moxifloxacin 0.5% eye drops (Moxivig®) for bacterial keratitis** (Moxifloxacin is an anti-microbial agent)
Date of Decision	**May 2017**
Date of Issue:	**June 2017**
Recommendation:	**RED – suitable for prescribing and supply by hospital only**
Further Information	• Moxifloxacin eye drops are accepted for use within South East London as an option for the treatment of bacterial keratitis in patients where **levofloxacin preservative free** would otherwise be considered (patients with preservative allergies, with atopy and ocular surface disease). • Moxifloxacin is a fourth generation fluoroquinolone, the 0.5% eye drop formulation is licensed for conjunctivitis and use in bacterial keratitis is therefore **off-label** (unlicensed). • The multi-dose bottle is self-preserved, contains no added benzalkonium, and may be suitable for patients who require a preservative free formulation. • The current formulary option for microbial keratitis is levofloxacin eye drops (a second generation fluoroquinolone), which are available as a preservative containing, and a preservative free formulation. The use of levofloxacin for this indication is also off-label. • Where avoidance of preservative is not necessary (e.g. in patients without pre-existing corneal epitheliopathy or small corneal ulcers [<1mm]) preserved levofloxacin will continue to be the agent of choice. • It should also be noted that the administration schedule for moxifloxacin eye drops in bacterial keratitis is also unlicensed. The drops are administered as follows: 1 drop hourly (day and night) for 2 days, then hourly (daytime) for 3 days, then four times a day until resolution (usually around 2 weeks). • Patients are followed-up in clinic very closely, until healed. Treatment is normally discontinued in the week following complete epithelialisation of an ulcerated cornea or resolution of corneal infiltrates. • As patients are followed up very regularly, prescribing and supply of the drops will be carried out by the hospital. In some **very rare** cases, patients may need extended treatment (e.g. prolonged cover for a slow-healing epithelial defect). In these circumstances the eye clinic may request the GP to prescribe. In line with the RED category definition, in very exceptional circumstances a specialist may discuss individual patient need for a RED drug to be prescribed by a GP. • One bottle of topical moxifloxacin is normally sufficient to cover the bactericidal and sterilisation phases of treatment (5 days of intensive therapy). • Patients should be informed about the unlicensed nature of the use of moxifloxacin in bacterial keratitis in line with the organisation's usual consent processes.
Shared Care/ Transfer of care required:	N/A

Cost Impact for agreed patient group	• Based on assumptions from the applicant, it is estimated that up to 400 patients [GSTfT and KCH, LGT service provided by KCH] per year might be suitable for treatment. • Moxifloxacin eye drops are cheaper than preservative free levofloxacin eye drops (£9.80 vs. £17.85 respectively, dosing schedules are the same). • Based on Trust usage data for GSTfT, replacing levofloxacin preservative free with moxifloxacin would result in savings of approximately £3,000. It is estimated that this would be similar at KCH and therefore savings across SEL are estimated to be £6,000.
Usage Monitoring & Impact Assessment	Acute Trusts: • Monitor and audit use against this recommendation as requested. • Submit usage data and audit reports upon request to the APC.
	CCGs: • Monitor ePACT data • Monitor exception reports from GPs if inappropriate transfer of prescribing to primary care is requested.
Evidence reviewed	**References (extracted from evidence evaluation)** 1. Tuft S, Burton M. Focus – Microbial keratitis. Royal College of Ophthalmologists 2013 2. Allan B, Dart J. Strategies for the management of microbial keratitis. British Journal of Ophthalmology 1995 (79) p777-786. 3. Wong R, Gangwani R, Yu L et al. New Treatments for Bacterial Keratitis. Journal of Ophthalmology 2014 doi:10.1155/2012/831502 4. Moxivig (moxifloxacin) eye drops: Summary of Product Characteristics. Available online at: http://www.medicines.org.uk/emc/medicine/23828 (accessed 05/05/2017) 5. Shah V, Tandon R, Satpathy G et al. Randomised clinical study for comparative evaluation of fourth generation fluoroquinolones with the combination of fortified antibiotics in the treatment of bacterial corneal ulcers. Cornea 2010 29 (7) p751-757 6. Constantinou M, Daniell M, Snibson G. et al. Clinical efficacy of moxifloxacin in the treatment of bacterial keratitis. Ophthalmology 2007 114 p1622-1629. 7. Scoper S. Review of Third and Fourth Generation Fluoroquinolones in Ophthalmology: In-Vitro and In-Vivo efficacy. Advances in Therapy 2008 25 (10) p979-994. 8. Sueke H, Kaye S, Neal T et al. Minimum Inhibitory Concentrations of Standard and Novel Antimicrobials for Isolates from Bacterial Keratitis. Investigative Ophthalmology and Visual Science 2010 51 (5) p2519-2524.

NOTES:

a) Area Prescribing Committee recommendations and minutes are available publicly on member CCG websites.

b) This Area Prescribing Committee recommendation has been made on the cost effectiveness, patient outcome and safety data available at the time. The recommendation will be subject to review if new data becomes available, costs are higher than expected or new NICE guidelines or technology appraisals are issued.

c) Not to be used for commercial or marketing purposes. Strictly for use within the NHS.