CASE RECORD:

Managing an Exceptional episode of Recurrent Viral Keratitis in a Child of 6 years or age.

You are presenting this case on behalf of a colleague. Chatham House rules apply but the patient and practitioners are not present. You must facilitate a discussion about the case.

The goal is to consider our evolving roles and responsibilities. Clinical responsibilities to patients and practice structures and procedures to remain safe.

<u>Competency Framework for Independent Prescribing</u>

1) CLINICAL AND PHARMACEUTICAL KNOWLEDGE
    a. 5. Maintains an up-to-date knowledge of products in the BNF / drug tariff (e.g. doses, formulations, pack sizes, storage conditions, costs)
    b. 8. Understands the public health issues related to medicines use
    c. 9. Appreciates the misuse potential of drugs
2) ESTABLISHING OPTIONS
    a. 1. Takes a comprehensive medical and medication history, including presenting symptoms*
    b. 5. Views and assesses the patient's needs holistically(psychosocial, physical)
    c. 13. Ensures that patients can access ongoing supplies of their medication (repeat prescribing)
3) COMMUNICATING WITH PATIENTS(parents, carers and advocates where appropriate)
    a. 5. Deals sensitively with patients' emotions and concerns
7) INFORMATION IN CONTEXT
    a. 1. Understands the advantages and limitations of different information sources
    b. 2. Uses relevant, up-to-date information; both written(paper / electronic) and verbal
    c. 3. Critically appraises the validity of information (e.g. promotional literature, research reports) when necessary
    d. 4. Applies information to the clinical context (linking theory to practice)

Record Card
October 2014

Male, Age 5.

Parents present with child as emergency. Not a GOS Eye examination.

RE very red and blurry for 2/7

POH: Viral keratitis previously treated by HES

Slit Lamp: RE Old subepithelial scars post past HSK. Active epithelial lesions consistent with active epithelial simplex keratitis.

Non-IP optometrist contacted HES and refers directly to Ophthalmology.

Question: Would any IPs treat this and how?

Record Card
27/12/14 (Saturday) 4.00pm

Parents present Saturday afternoon very distressed.

Patient is NOT present.

Another episode of acute red eye (RE). Went directly to general casualty (Eye Casualty closes at 11.30am).

Prescription for Viroptic given. Parents not aware, if they were informed, that Viroptic is not widely available. Viroptic may have been available at hospital pharmacy. Parent's took Rx and tried to fulfil via numerous community pharmacies.

4.00pm presented at practice with prescription and requesting advice.

Initial investigation unfruitful – No entry for Viroptic in Electronic Medicines Compendium or BNF; HENCE:

GOOGLED: Viroptic: Identified as anti-viral Trifluridine

Viroptic - Clinical Pharmacology

Trifluridine is a fluorinated pyrimidine nucleoside with *in vitro* and *in vivo* activity against herpes simplex virus, types 1 and 2 and vacciniavirus. Some strains of adenovirus are also inhibited *in vitro*.

Viroptic is also effective in the treatment of epithelial keratitis that has not responded clinically to the topical administration of idoxuridine or when ocular toxicity or hypersensitivity to idoxuridine has occurred. In a smaller number of patients found to be resistant to topical vidarabine, Viroptic was also effective.

Trifluridine interferes with DNA synthesis in cultured mammalian cells. However, its antiviral mechanism of action is not completely known.

In vitro perfusion studies on excised rabbit corneas have shown that trifluridine penetrates the intact cornea as evidenced by recovery of parental drug and its major metabolite, 5-carboxy-2'-deoxyuridine, on the endothelial side of the cornea. Absence of the corneal epithelium enhances the penetration of trifluridine approximately two-fold.

Intraocular penetration of trifluridine occurs after topical instillation of Viroptic into human eyes. Decreased corneal integrity or stromal or uveal inflammation may enhance the penetration of trifluridine into the aqueous humor. Unlike the results of ocular penetration of trifluridine *in vitro*, 5-carboxy-2'-deoxyuridine was not found in detectable concentrations within the aqueous humor of the human eye.

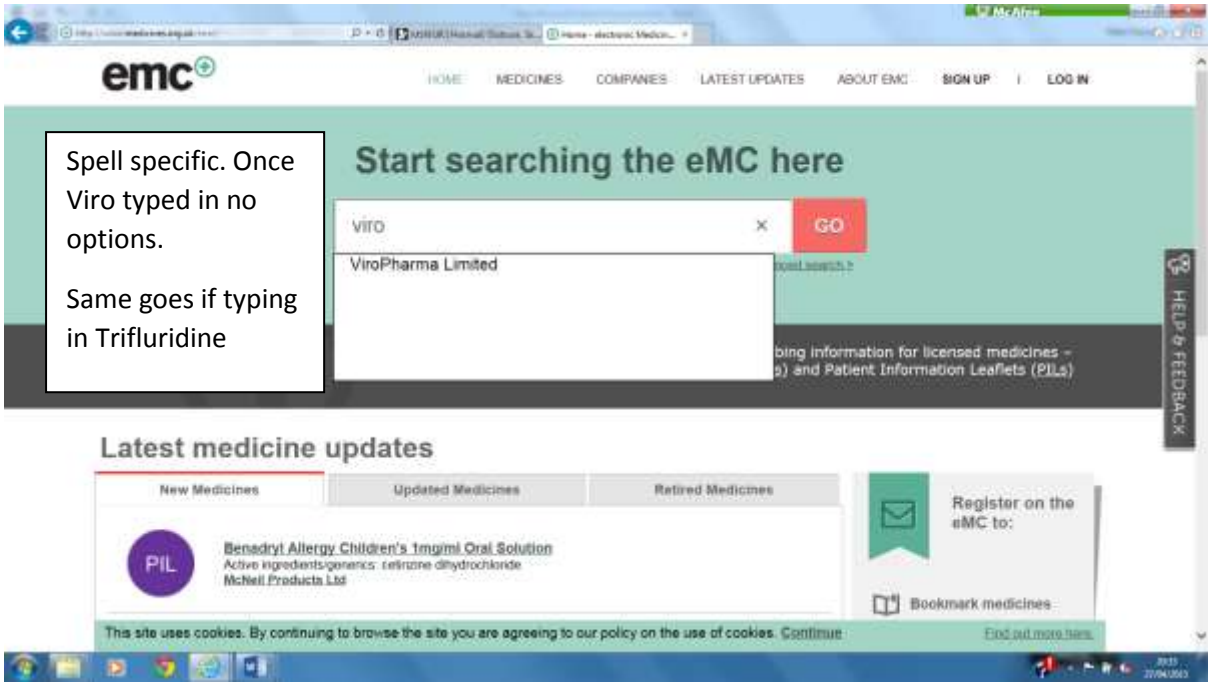
Systemic absorption of trifluridine following therapeutic dosing with Viroptic appears to be negligible. No detectable concentrations of trifluridine or 5-carboxy-2'-deoxyuridine were found in the sera of adult healthy normal subjects who had Viroptic instilled into their eyes seven times daily for 14 consecutive days.

Re-tried with both Viroptic and Trifluridine in

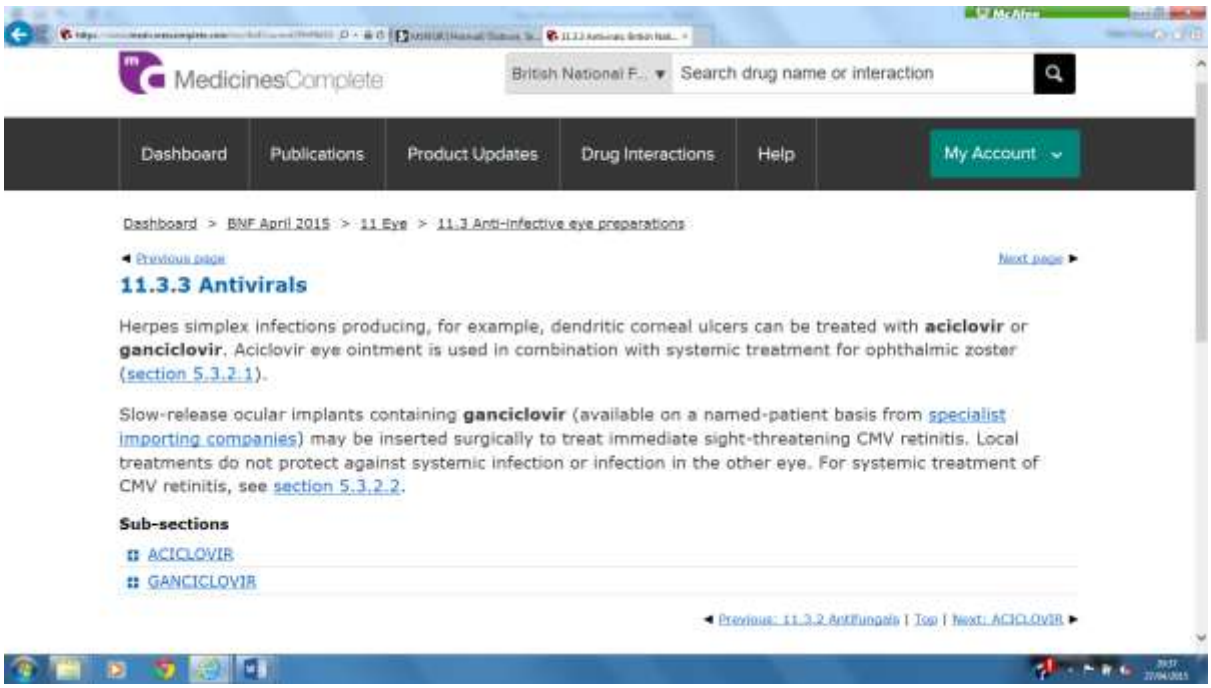
ELECTRONIC MEDICINES COMPENDIUM

BNF

No Listings.



BNF: Aciclovir and Gancicovir listed but no others. Vioptric appears unlicensed.



Advised parents accordingly. Stressed need for prompt treatment. Queried why unlicensed drug prescribed. Outcome audit indicated Aciclovir temporarily unavailable. 1) Presumably Viroptic Rxd as alternative and 2) Presumably Viroptic available via hospital pharmacy. If so the patient was not made aware

this was necessary. Parents tried to source product from local pharmacies with no success.

After full discussion and patient involvement on management strategy Ganciclovir Rxd via practice and stressed to contact ophthalmology Monday morning.

Question: Ethical dilemma. Alternatives?

Ring Ophthalmologist-on-call and send Px back to HES (40 miles away).