

Contact Transmission: Ocular  
DoD Vaccine Healthcare Centers (VHC)

Footnote	Topic:	Details:
1	Types of Eye Involvement	<p>1. <b>Periocular</b> (generally above the brow or below the inferior orbital rim): Papules, vesicles or pustules not involving the ocular adnexa, lids, lid margins, or canthi.</p> <p>2. <b>Blepharitis</b> (lid involvement):  <b>Mild</b> – few pustules, mild edema, no fever.  <b>Severe</b> – pustules, edema, hyperemia, lymphadenopathy (preauricular and/or submandibular), cellulitis, fever.</p> <p>3. <b>Conjunctivitis</b> (involvement of membrane that lines inner surface of the eyelid and exposed surface of the eyeball; excluding the cornea):  <b>Mild</b> – mild hyperemia and/or edema, no membranes or focal lesions.  <b>Severe</b> – marked hyperemia, edema, membranes, focal lesions, lymphadenopathy, (preauricular and/or submandibular), fever.</p> <p>4. <b>Keratitis</b> (corneal involvement):  <b>Mild</b> – gray epithelitis, no epithelial defect, no stromal haze or infiltrate (no cloudy cornea)  <b>Moderate</b> – epithelial defect  <b>Severe</b> – ulcer, stromal haze or infiltrate (cloudy cornea).</p>
2	Treatment for Periocular Involvement	<p><b>Periocular lesions only</b> (no lid involvement or lesions in eye)</p> <ul style="list-style-type: none"> <li>- Close observation.</li> <li>- Consider ophthalmology consultation to assist in management.</li> </ul>
3	Treatment for Blepharitis	<p><b>Mild Blepharitis</b></p> <ul style="list-style-type: none"> <li>- Begin topical antiviral prophylaxis<sup>10</sup> <ul style="list-style-type: none"> <li>o Topical Trifluridine (Viroptic®)- 5 times/day (every four hours while awake) for up to 14 days or until all periocular lesions have healed and scars have fallen off. If no improvement or symptoms worsen after 24-48 hours consider increasing to 9 times/day (every two hours while awake)</li> </ul> </li> </ul> <p><b>Moderate/Severe Blepharitis</b></p> <ul style="list-style-type: none"> <li>- Begin topical antiviral prophylaxis<sup>10</sup> <ul style="list-style-type: none"> <li>o Topical Trifluridine - 5 times/day (every four hours while awake) for up to 14 days or until all periocular lesions have healed and scabs have fallen off. If no improvement or symptoms worsen after 24-48 hours consider increasing to 9 times/day (every two hours while awake)</li> </ul> </li> <li>- Ophthalmology consultation in 12-24 hours or sooner to evaluate and assist in management.</li> <li>- Consider VIG<sup>8</sup> consultation. [Call (888) USA-RIID or (301) 619-2257.]</li> </ul>
4	Treatment for Conjunctivitis	<p><b>Mild Conjunctivitis (no visible lesions in or near the eye)</b></p> <ul style="list-style-type: none"> <li>- Consider differential diagnosis for new red eye with high index of suspicion for vaccinia infection.</li> <li>- Close observation for development of suspicious lesions.</li> <li>- Ophthalmology consultation as indicated to evaluate for possible vaccinia vs. other unrelated causes.</li> <li>- Further treatment as indicated by ophthalmic exam.</li> </ul> <p><b>Mild Conjunctivitis with suspicious lesions in or near the eye (no corneal lesions)</b></p> <ul style="list-style-type: none"> <li>- Begin topical antiviral prophylaxis<sup>10</sup> <ul style="list-style-type: none"> <li>o Topical Trifluridine - 5 times/day (every four hours while awake) for up to 14 days or until all periocular lesions have healed and scabs have fallen off. If no improvement or symptoms worsen after 24-48 hours consider increasing to 9 times/day (every two hours while awake)</li> </ul> </li> <li>- Urgent Ophthalmology consultation</li> </ul>

		<p><b>Severe Conjunctivitis with suspicious lesions in or near the eye (no corneal lesions)</b></p> <ul style="list-style-type: none"> <li>- Topical antiviral prophylaxis<sup>10</sup> <ul style="list-style-type: none"> <li>o Topical Trifluridine - 5 times/day (every four hours while awake) for up to 14 days or until all periocular lesions have healed and scabs have fallen off. If no improvement or symptoms worsen after 24-48 hours consider increasing to 9 times/day (every two hours while awake)</li> </ul> </li> <li>- Emergent Ophthalmology consultation</li> <li>- Consider VIG<sup>8</sup> consultation. (Call (888) USA-RIID or (301) 619-2257.)</li> </ul>
5	Treatment for Keratitis only	<p><b>Keratitis only</b></p> <ul style="list-style-type: none"> <li>- Emergent ophthalmology consultation to evaluate and assist with management.</li> <li>- VIG<sup>8</sup> not indicated [Consider when there is a co-morbid condition (eczema vaccinatum or progressive vaccinia)].</li> <li>- Consider topical ophthalmic antibacterial prophylaxis in the presence of keratitis.</li> <li>- Begin topical antiviral treatment<sup>10</sup> <ul style="list-style-type: none"> <li>o To minimize progression and begin resolution of vaccinia infection in cornea and conjunctiva:</li> </ul> </li> <li>- Topical Trifluridine - 9 times/day (every two hours while awake) for up to 14 days or until all lesions have healed. Hyperemia is an expected consequence of therapy, especially after 14 days use.</li> <li>- After corneal epithelium has healed, consider use of topical steroids under supervision of an ophthalmologist.</li> </ul>
6	Treatment for Keratitis with mild or moderate blepharitis or conjunctivitis	<p><b>Keratitis with mild or moderate blepharitis or conjunctivitis</b></p> <ul style="list-style-type: none"> <li>- Emergent ophthalmology consultation.</li> <li>- Begin topical antiviral treatment<sup>10</sup> <ul style="list-style-type: none"> <li>o To minimize progression and begin resolution of vaccinia infection in cornea and conjunctiva:</li> </ul> </li> <li>- Topical Trifluridine - 9 times/day (every two hours while awake) for up to 14 days or until all lesions have healed. Hyperemia is an expected consequence of therapy, especially after 14 days use.</li> <li>o Observe for progressive disease.</li> </ul>
7	Treatment for Keratitis with severe blepharitis and/or conjunctivitis	<p><b>Keratitis with severe blepharitis and/or conjunctivitis:</b></p> <ul style="list-style-type: none"> <li>o Begin topical antiviral treatment<sup>9</sup></li> <li>- Topical Trifluridine - 9 times/day (every two hours while awake) for up to 14 days or until all lesions have healed. Hyperemia is an expected consequence of therapy, especially after 14 days use.</li> <li>o Consider VIG<sup>8</sup></li> </ul>
8	VIG	<p><b>VIG consultation:</b> call (888) USA-RIID or (301) 619-2257.</p> <ul style="list-style-type: none"> <li>- VIG is typically contraindicated if keratitis is present. [Consider only if there is a co-morbid condition (eczema vaccinatum or progressive vaccinia).]</li> <li>- Consider consultation with Allergy and Immunology or Infectious Disease consultants regarding implementation of VIG</li> </ul>
9	Multidisciplinary Case Discussion via Conference Call	<p><b>VHC will arrange multidisciplinary conference call:</b> The following information will be provided to participants:</p> <ul style="list-style-type: none"> <li>- time scheduled</li> <li>- number of participants</li> <li>- conference ID</li> <li>- Toll free dial in number</li> <li>- Participant code</li> </ul> <p>[Should you need assistance during your conference, please press # then 0 for a list of menu options including Specialist assistance.] VHC Physician:</p>

		Duty hours: 202-782-0411 Non-duty hours: Call DoD Vaccine Clinical Call Center at (866) 210-6469 for provider and number
10	Topical antivirals	<b>Available Topical antiviral agents:</b> Trifluridine (Viroptic®) and vidarabine (Vira-A®). are not approved by FDA for treatment of vaccinia disease, although the product labels for trifluridine and vidarabine state that the drugs have <i>in vitro</i> and <i>in vivo</i> activity against vaccinia virus. Vidarabine is no longer being manufactured, but supplies might be available in certain areas. Cidofovir, which is active against orthopox viruses and suggested for possible treatment of smallpox, has not been evaluated for use in ocular vaccinia or keratitis.