

# Severe Ocular Cowpox in a Human, Finland

## Technical Appendix

**Technical Appendix Table 1.** Orthopoxvirus and cowpox virus diagnostic findings of the patient in Finland\*

Analyte	Months after symptom onset, no.						
	0.5	1	3	4	5	8	≥9
OPV IgG titer	1,280	1,280	320	320	NA	NA	NA
OPV IgM titer	320	1,280	40	40	NA	NA	NA
Real-time PCR from conjunctival swab/ contact lens, HA gene, Cycle threshold values	+	NA	+	+	+	+	-
	Swab 33.7		Swab 35.7	Swab 41.4/ Lens 43.1	Swab 35.4/ Lens 38.2	Swab 48.3	
Virus isolation: CPE in Vero cells and electron microscopy	+	-	-	-	-	-	-
	PCRs from cell culture + for genes HA, TK, ATIP, and 14 kDa protein						

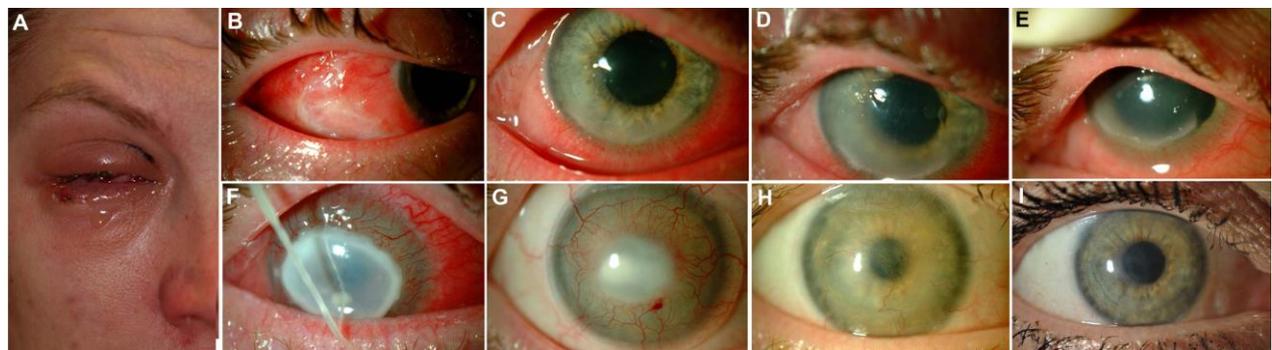
\*OPV, Orthopoxvirus; NA, Not analyzed; CPE, Cytopathogenic effect; HA, Hemagglutinin, 1,091 bp, GenBank accession no. KR054112; TK, Thymidine kinase, 342 bp, KR054113; ATIP, A-type inclusion body protein, 1,590 bp, KR054111; +, positive; -, negative.

**Technical Appendix Table 2.** Results from the environment and rodents from the yard of the patient's home, its vicinity, and more distant regions

Sample description	No. samples	No. positive in IFA (%)	Comments on positive samples	No. positive in PCR* (HA and 14 kDa protein)
Environmental samples from the patient's outdoor storehouse†				
Dead insect, pieces of dry leaves, rubbish, dust, small pieces of paper	8	0		0
Rodents trapped in patient's yard and neighborhood				
Bank vole, <i>Myodes glareolus</i>	9	1 (11.1)	Male; antibodies had high avidity; mildly icteric.	0
Yellow-necked mouse, <i>Apodemus flavicollis</i>	14	1 (7.1)	Male; because of low titer, avidity was indeterminable.	0
Total rodents	23	2 (8.7)		0
Rodents trapped elsewhere in southern Finland (distance from patient's home)				
Mäntsälä (30 km)	33	7 (21.2)	Bank voles	NA
Riihimäki (50 km)	55	3 (5.5)	Bank voles, yellow-necked mouse	NA
Heinola (100 km)	48	41 (85.4)	Bank voles, field voles ( <i>Microtus agrestis</i> )	NA

\*HA, Hemagglutinin; NA, Not analyzed.

†Patient had cleaned the storehouse 1 week before onset.



**Technical Appendix Figure.** Patient's facial image and a series of progressive cornea images after onset of disease. A) Facial image at 2 weeks. B) Cornea image at 2 weeks; C) at 2 months; D) at 3 months; E) at 5 months; F) at 7 months; G) at 15 months; H) at 30 months; I) at 4 years.