

7KLV DUWLFOH LV UHSULQWHG RQ WKH &DUWHU &HQWHU V ZHEVLWH Z
OHGLFLQH DQG +\JLHQH

\$P - 7URS OHG +\J SS
GRL DMWPK
&RS\ULJKW [7KH \\$PHULFDQ 6RFLHW\ RI 7URSLFDO OHGLFLQH DQG +\JLHQH](#)

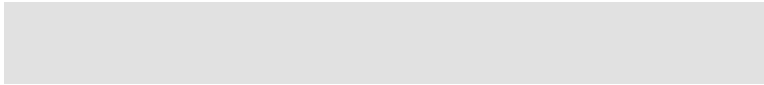
CASE-REPORT

Emergence of 2 QFKRFHUF From Skin Mincing
'UDFXQFXOLDVLV PHGLQHQLV

Mark L. Eberhard 0.11.18.2018 of H[(3(e)7(alth/G)Mahana0 41He)4(alth)C005-361.24 -11.52 Dracunculus medinensis QIHE @ LZR
ZRUP UHFRYHUG ZDV LGHQWLILHG DV

*XLQHD ZRUP GLVH7KDYHUE SRIQWU6 FMDYHOG/ DQG IXUWKH
SURYILXGHWKHU LQVLJKW LQWR WKH ELRDRS OIRF DRQLFRQV HIRU L*
ZRUP HUDGLFDWLRQ SURJUDPV

(OHYHQ DGGLWLRQDO V. S. H. A. S. K. D. Y. H. U. E. S. R. I. Q. W. U. 6. F. M. D. Y. H. O. G. / D. Q. G. I. X. U. W. K. H. ±
7KHVH VSHFLPHQVE DHHJWSEUHWHHQWURP *KDQD RQH LQ
DQG WZR LQ DQG RQH HDFK IURP BQDQGDVH G ,Y&I
6HYHQ RI WKHSRQWVHGZIHURP PDOHV WKUHH IURP IHPD



), * 85(&DPHURRQLDQ ZRPDQ IUI
Onchocerca volvulus HPDOH ZRUP ZDV U
KHHO RI AWK, PDJR W V GUHVVLQJ
B , PDJH RI ZRUP EHLQJ H[WUDF
7KLV ILJXUH DSSZDZUMLVQPKROR.

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[>LQ D QHZ ZL](#)

:KHQ H[DPLQHG XQGHU D PLFURVFRS K D WWWZDWH PPHVSHFWPH
QRW *XLQHD ZRUPH DDVQ @ WLGHQZVBLVHIGS ENFIDXPDOIRI WKH GLV
QDWXUH RI)WJKXU FIX WHL FFXHWL FODV RUSKHPDFKHD UDFWHULVWLF IH
LQFOXGLQJ H[W H M Q DDJ R X G CHW KWK DRG\ DQG LQWHUQDO ED
GLIIHUHQW VSHFLHV KDYH GLVWDOGF WXPHE HUL JRI DQQVMSQ BQQ
ULGJH Onchocerca volvulus W KHUHWZR VWULDH SHU ULGJH RQH XQGHU DG

\$ FRQVSLFXRXV IHDWXUHORvbiwixsP DVQ HL Q RHUPVDLRLQ Q LRM KV X E F X V
QRGXOHV LQ ZKZRKJ FVR IPDN GE H GXPV QVWUDWHG 7KH SDUDV
GHVFULEHG LQ E\ /HXFNDUW DU S PI UVRGX O G V * KDOGDH U' HWKSH
ZHOO GRFXPHQWHGL R WRXORUJH Q FHS S I Q DUDQFH RI VXFK QRGXC
QRGXOHV PD\ RFFXU LQ GHHS W LQRM U S V D F O H G L Q R W D E X W K R D Q L
QRWHG RU VSHRFXQDWHG FRIQRW D G XOW ZRUPV QRW EHLQJ HG
ORKDPPHG VSHFXODWHG WKDW DRGXVSRQRUP DWLRLQ DZFDWL SQ
GHJHQHUDWLQJ ZRIULPQ/MXUUA DV R HWKXO WRUP DQ H[SODQDWLRL
SUHVHGW RYHU E-RQ L S URPHL R U I Q G F W D N Q R L W W R I H D F F R R X Q W W K I
\RXQJ IHPDOH ZRUP E V H D U Y I R G W L H Q Q Q E H G X O H V + R Z H Y W U D W W L V
QRGXOHV FDQ EH SDOSDWHG LQ IHZHU FV K L O G U H Q I Z B W Q J D P
SUHVXPHG \RXQJHU SRS X V K D W L R Q L R I S I R S P R U W E L X V Q L Q F U H D V
PLFURILOD S I H U S R Q V V P L R Y H W K D Q \ H D U V R I D J H

:RUWK QRWLQJ EXW RI XQFHUWDLQQY D O X M E D W H K D H U D I O D Z H
DQG WKDW PRV W D D S S U H D E M G W R X Q H E D V H G R Q R U J M K H R Z H Y
VSHFLPHQV FRQWDLQHG PL F P D R W I X O D U L D R H Q L O G G F F D W H L Q J W K D G
ZLWKRXW W R H D R O P R O X Q L R Q % D V H G R Q S H U V R Q D V K H R E V H U Y D W
ZRUNLQJ LQ WKH ILHOG RI R Q F I Q R R G K O F L D V I J W L D Q G W W H I G D Q D S
SURJUDPV R S U R W R F B O F K L W V H H P V Q H D U O \ L P S I R R V I H E O H G W G
WKH SUHVHGW F D V H V Z H U H Q R G W O B I O D Q G F R V K W D L Q R I G H Z E R W K L H
WKDW QR G A X I O H F R X X U L Q H J R I H [W U D F W L R Q

8QIRUWXQDWHO\ DGGLWLRQDO L Q Q R G F D V L R Q O R Q E H W K B M A X F O
:H EHOLHYH WKDFW D P D Q P B I W B Y H F R P H I U R P D U H D V U H F H L Y
SDUW RI PDVV GUXJ DGPLQLVWUDW W R R Q V X U S J H F D P G U X X W Z H D
FDXVH RI ZRUP H S S I X O V H L Q R Q F L D V W K H D Q G Z H G R Q R W V X V S H F V
ZLWK QRGXOH IRUPDWLRQ DQG W R H W H Q R R I G X O H F F R I X O D M B G R R L
L I D R I W K H S I Z U K R R P Q W K I H V R P Z R U P V Z H U H H [W U D F W L H G K D G
WKH VNLQ LQGLFDWLQJ WKH S Z R H U P H V Q F R H J R Z I K R I W W K I H W D Q G I S D I O
QRGXOHV ZHUH S H U F D I Q Q R W / D V W O L W K D Q \ F H U W D L Q W \ Z K H W
IRUPDWLRQ RI WKH VNLQ OHVLRQ W R G H R I S U H Q L Q R J V Z K B W K H Q D
FDVHV D * X L Q H D R Z R U R S I R O X L Q W R H H D Q R W K H U K H D O W K Z R U N I
KLPVHOI RU KHUVHOI VFUDWFKHGI R V U X M W W W K I H R V N K Q Z O Q F K F V
HPHUUJHG +RZHYH V H Y L Q U M D L S R U L Q J D V U G D Q E H P D G H Q R M H P D Q
KDYH FHUWDLQ KDOOPDUN I H Z R V X P J G V V R I D D V H V U X K H B B V Z D R I Q * R
D F O D V V U E J E X O I H V W H F D X V H P D r a c u n d u s Z H R P O V H V H F U H D W H R U U H O F
V X E V W D Q F H W K D W F U H D W H V W Z R U I R W F D W L Y R I O \ R H I P W K H J H E O I L V M
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XWHULQH WXEH LV SURWUXGLQJ
WUDQVSDUHQW DSSHDUDQRH DWKL
ZZZ DMWPK RUJ

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>LQ D QHZ Z

\$OWKRXJK WKH SUHVHQWDWLRQ RIRZR KRP DWK RFXK R FM KIF LDM
H[SHULHQFH LW ILQ FEHLDQJL QHCR B WHHG WKH SDVW W KIEV GH E
SUHVHQWDWLRQ LV FDXVHG E\ WZRU B HFLMH DMHQ JDLOF IZGN QV
OXPSHG ZLWKLQ DWK DW RGLPWH DWK DW QH HUJHG IURP WKH VNLQ
ZRUPV :LWK WKH KHLJKWHQHG LQW B DWVAD V G VGR F XR HQWL Q
GLVHGVH WR VXSSUH QWNS UN SGLR QGRD WUXDQ HVPLVVLRQ WK
RQFKRFH DWK DW RLV QVZ E HUFRH Q DW R RSDU EDVAF QWLRQ F W

QRGXOHV :H DUH QRLW KHEW HR IWRKDI G B UTHXHW WLRQV RWKHU V
GRFXPHQWHG RFFXUUHQFH RI WKH FDVUHWJ D R G V QS UZKYDLG HP D
PD\ QRW EH DQ XQXVXDO DVSHFW RI RQFKRFHUFLDVLV

5HFHLYHG \$XJXVW

\$FFHSWHG IRU SXEOLFDWLRQ 6HSWHPEHU

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:H WKDQN DOO 0LQLVWU\ RI +HD B WKG W K B Q W K W H J D Q H Q W H L U R Q D Q G D W K I R
FROOD B Q W L W Q D Q V S R U W RI V S H F L P H Q V & R R O W B E R : U R D W I G Q J H S C Q W K H D U D D Q & J

\$XWKRUV DGGUHVHV 0DUN / (EVHUKDUG D Q G L O D L R D U R D 3 B H Q W L H W L F I R U
3UHYH Q W O B Q W P O H P # F L G F (U R Y H V W R 5 X L J 7 L E H Q G U B F W Q R X O 3 W R J L V D P 7 K H
& H Q W H U \$ W O D E W X D L T W L # P S R Q S U H G X 6 . R U N R U * K D Q D * X U B H W D : F R U P (U D G
* K D Q D + H D O W K 6 H U Y L F H V H D P O X I R U K R Q B # K P R D I O S R U J ' L Y L V L R Q R I) R R
: D W H U E R U Q H D Q G L V G D W U R Q B H Q W H O V I R U ' L V H D V H * & R Q W U R O D Q G 3 U H Y
V W U # F G B K I R O L S ' R Z Q V 1 H J O H F V U R G J U D I R S & F I D O V H L V H P W H Q W H U Q D W L R Q D C
' H Y H O R S U P R X S V 5 7 , , Q W H U Q D W L R Q D C S G : B Z Q L Q U W R Q U ' & (P D L O

\$GGUHV FRUUHVSRRGHQFH WR 0DU'NVHD EHV KDQG 0DQDMLBQ &HQWUWU
&RQWURO DQGD BDNWRSWLRQ %XIRUG +LJKZD\ 1((PSWODQWD *\$
PHEHUKDUG#FGF JRY

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+RSNLQV '5)RHJH :+ *XScento2ZRUP GLVHDTV

&HQWHUV IRU 'LVHDTV &RQWURO DQG 3UHYHQWLRQ
GUDFXQFXOLDVL-XQ+D QMVRJ Morb Mortal Wkly Rep8 ±
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ZZZ FGF JXLQHDZRUP UHV RYZZFHFVZJXLSQ M B ZRUP UHV RX
XS JZ \$FFHVHVG 6HSWHPEHU

%LPL /)UHHPDQ \$5 (EHUKDUG 0/ 5XLJ 7LEHQ (3LHQL
Dracunculus medinensis U R P insignis E\ WKH VHTXHQFH DQDO\VLV RI W
JH Ann Trop Med Parasitol 99 ± >&URV>: 5HEI @ I 6 B D H G P H L @ H @

(EHUKDUG 0/ 0HOHPRNR * =HH \$. :HLVVNRSI 0* 5XL] 7
0LVLGHQW IOnChFDeWLVRIQUS DIV JXLQHADn ZpUMe Parasito95
± >&URV>:HEI@I 6EDHGDL@H@

\$OELH] (- %XWWQHU ': 'XNH %2 'LDJQRVLV DQG H
RQFKRFHtopMedParasitoB9 ± >0HGOLQH@

'XNH %2 2QFKRFHUFLDVLV GHHS ZRSPScEXQGOHV F
Trop Med Hyg64 ± >:HE RI 6EDHGDL@H@

0RKDPPHG \$6 &RQWULEXWLRQ WR WKH VWXG\ RI W
RI KXPDQ DQG ERYLAOnTropMed Parasito25LDV±V

9DQ GHQ %HUJKH / 5HFKHUFKHV VXU O RQFKRFHUF
DGXOWHV HW OHXU O RfDSOLedgMedTropFKH]±O KRPPH

%HFNHU & . \$GkOenCaMlOUdsJLDHH LAnVdcBMgMed
Trop30 ± >0HGOLQH@

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