

5HYLHZ \$UWLFOH 20,&6 ,QWH

'HPRGH[2XWEUHDN &DXVLQJ 3DOSHEUD 6NLQ

6WHUJLRV .DUDSVLDV 3DWHOLV DQG \$JDWKL 6JRXURX
&OLQLFDO 0LFURELRORJ\ /DERUDWRU\ *HQHUDO \$LU)RUFH +RVSLWDO \$WKHQV *UHHFH
&RUUHVSRRGLQGLQW\ .DUDSVLDV &OLQLFDO 0LFURELRORJ\ /DERUDWRU\ *HQHUDO \$LU)RUFH +RVSLWDO
NDVW #\DKRR JU
5HFHLYHG) \$FFHSWHG 3XEOLVKHG
&RSULJKW .DUDSVLDV 6 HW DO 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUPV
XVH GLVWULEXWLRQ DQG UHSURGXFWRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXU

\$EVWUDFW
'HPRGH[VSS PD\ FDXVH EOHSKDULWLWV DQG SDOSHEUD VNLQ OHVLRQV 6LQFH HVSUHDGDEOH LQ WKH FRPPXQLW\ HYHU\ SDWLHQW ZLWK FKURQLF QRQ GLDJQRVHG VSS 7HD WUHH RLO WUHDWPHQW PD\ EH DQ HIILFLHQW DQG VDIH WKHUDSHXWLFDO

.HIZRUGWPRGH[2FXODU GHPRGLFRVLV %OHSKDULWLWV 7HD WUHH RLO ,QWURGXFWRQ

'HPRGLFLGDH VSHFLHV DQG HVSHFLDOO\ 'HPRGH[VSS SDUDVLWH LQWR DQLPDO PDPPDO IROOLFOHV DQG PD\ FDXVH VNLQ OHVLRQV WR KXPDQ VXEMHFWV\WKH VVXG\ LV WR UHSRUW DQ RXWEUHDN RI RFXODU VNLQ SDOSHEUD LQIHFWLRQV GXH WR 'HPRGH[DPRQJ FRPPXQLW\ SRSXODWLRQ

ODWHULDOV DQG OHWKRGV
H VVXG\ FRPSULVHG DOO H\HODVK VSHFLPHQV FROOHFWHG DW WKH RSKWKDOPRORJLFDQ FRPPXQLW\ZOOV DQG H[DPLQH IRU)LJXUHV DQG DW WKH &OLQLFDO 0LFURELRORJ\ /DERUDWRU\ RI WKH +HOHQLF *HQHUDO \$LU)RUFH +RVSLWDO LQ \$WKHQV IURP -XQH VW 'HFHPEHU VW

)LJXUWPRGH[\$S RQWR H\HODVK OHVLRQV
[

\$OO SDWLHQWV KDG V\PSWRPV RI EOHSKDULWLWV ZLWK DQWLPLFURELDO FROO\ULD QHJDWLWV DQG QHJDWLYH &KODP\GLD H[DPLQDWLRQV PLOG HGHPD LWFK PLOG RU QR HU\WKHPD VHFUHWLRQ IURP H\HODVK IROOLFOHV)LJ

)LJXUWPRGH[\$S RQWR H\HODVK OHVLRQV
[

)LJXUWPRGH[\$S RQWR H\HODVK OHVLRQV
[

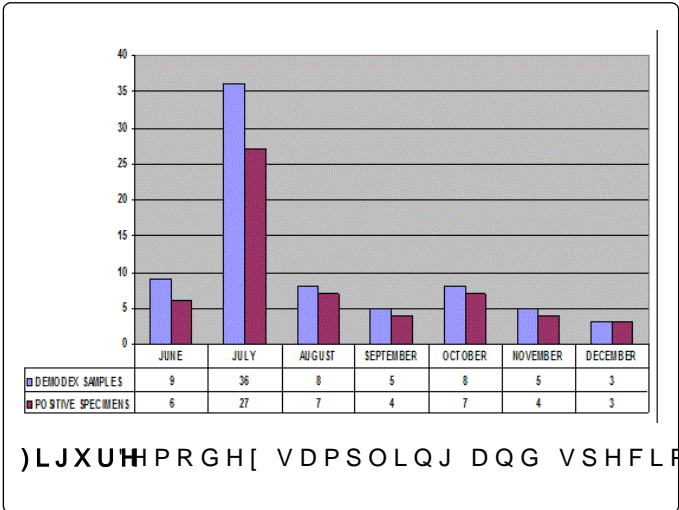
(YHU\ H\HODVK VDP SOH LQFOXGHG DW OHVLRQV XSSHU DQG ORZHU SDOSHEUD RI WKH SDW

PLFURVFRSH OHQVHV P'DJQD]CQWLBQQLVFXWVQ RQ
[UHVSHFWLYHO\

5HVXOWV

:LWKLQ D VHYHQ PRQWK SHULRG
'HPRGH[ZHUH UHJLVWHUHG IURP P
VXEMHFWV VDPSONV ZHUH SRV
RYHUDDO IURP PDOH RYHUDDO
VXEMHFWV RYHUDDO ZRPHQ 3R
UHODWHG QHLWKHU WR WKH PRQWK
JHQGHU FKL VTXDUH > [@ FULWHULRQ
GHFODUHG WKH\ ZHUHQdW RZQHUV RI
GHPRGLFRVLV FDVHV WKURXJKRXW WLP

2EVHUYDWLWLRQ 'RPRGD]FQRQGLVF XO R O X V I K D C
SLORVHEDFHRXV FRPSRQHQWV RI WKH H\H
VLQFH ,Q KXPdqV GHPRGH[LV DOVR
WKHFRUHKHHD]PELDWRUQLQRIWKH
DOHQDOV DQGVRPHWRPHDQVHV D FRO
HPRGLFRVLV ODUHVIURPHGD]H
RYHUDDO IURP PDOH RYHUDDO
UHODWHG ZRPHQ 3R RYHUDDO
RURWDFSDHQRDQDQWLHQHQHWRU
\$GGLRQDQV PRV RI WKH SDWLHQV
SDOSHEUD GHPRGLFRVLV
SDOSHEUD VNLQ OHVLRQV 6LQFH RXU
GHPRGLFRVLV WR EH TXLWH VSUHDGDEOH
ZLWK FKURQLF QRQ GLDJQRVHG EOHSKDU
'HPRGMSS 7HD WUHH RLO WUHDWPHQW
FKRLEH D]D]QV REXODU GHPRGLFRVLV
DQGDUGLVHG PHWRGRORJ 'HW 2UDO
WUHDWPHQW DQG WUHDWPHQW



	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
DIAGNOSTIC SAMPLES	9	36	8	5	8	5	3
POSITIVE SPECIMENS	6	27	7	4	7	4	3

)LJXUHHPRGH[VDPSONLQJ DQG VSHFLPHQV

'HPRGH[WUHDWPHQW KDV QRW D VWDQGDUGLVHG PHWRGRORJ 'HW 2UDO
DGPLQLVWUDWLWLRQ RI LYHUPHFWLQ FRXOG EH DO HYLGHQFH EDVHG WUHDWPHQW
DOO SDWLHQWV > @ EXW LYHUPHFWLQ EVLWUHDWPHQW LFDFDOO\ DYLDODEOH LQ *UHH
RI OHODFXOD WUHH WHPD]WKHURXJKRXW FKURQLF QRQ GLDJQRVHG EOHSKDU
GXH WR HQFRXUDJLQJ ELEOLRJUDSKLF GDWD > @ QDQLRQV WUHDWPHQW FRVW
,Q WKH EHJLQQLQJ DOO SDWLHQWV KDG EHHQ WUHDWPHQW IRUKWRXWV VL[ZHHNV
GDLO\ XVH RI YDULRXV FRPPHULDO FRVWV WDLF VKDPSRQLQ: FRQW D & Q J < 7 2W DO
XS WR 'DLO\ 772 VKDPSRQLQ IRU DALV FRVWV DQGRVWPHQWGHG RLU H\HOLG
PDVVDJLQJ DQG VFUXEELQJ SDWLHQWVd KDUHQRVVLV LQVHQFRV DQG H PRKUVH ERWK
H\HOLGV DQG DOO H\HODVKHV 3DWLHQWV* ZHUH DG YLVHQWR DSSO 5 ZDVH Z 8 W HU
FKDPRPLOH FRPSUHVVHV RQWR WKHLU H\HODVK IRU VFRF LQ V ZW E HRXU W KHLR G
772 VKDPSRQLQJ WUHDWPHQW LQ RUGHU WR LPSURYH 'HPRGH[GLVFDUG
GXULQJ 772 H\HOLG VFUXEELQJ
*DR < 3DMFXDOH 0\$ (OL]RQR \$ 7VHQJ 6 &
RI RFXODU GHPRGRVLV EI OLG VFUXE ZLW

1HDOU\ KDOI RI WKH SDWLHQWV ZHUH IXQR\UHOLWVHG SDWLHQVHBSR (D]BQGR \$ H
PRQWK RI VKDPSRQLQ EXW WKHWRWKHU KDOYUWKH ZHUHYGRWoolQJ RI RFX
SDWLHQWV FRQWLQXH 772 VKDPSRQLQ DQGLVWLRQ DOO\ XQGHUZHQW GDLO\
WUHDWPHQW ZLWK 772 GLOXWHG LQ PHQVBN RLOHUPDOQRVSHOGEOD]RQ :LO
WKH SDWLHQWVd HQGXUDQFH WR 772 RFXU SLDL WDLVHQVSSOLFRW LRK RYLV
ZDV GRQH E\ D FRWWRQ WLS RQRW H\HODVK DQG H\HODVKV)LYH WR WHQ
PLQXPHWU DSSOLFDWLWLRQ H\HOLGV DQG GHODVNRV ZHUH V\%XEEHG 'HPRGHFWLF
IRU DSSOL]PDWHO\ PLQXWHV DFRUGLO QVWRWLEORJUDSK] > @ 3DWLHQWV
ZHUH DG YLVHG WR SHUIRUP 772 VHU XV W R E H PRV D Q G U R V D E H L Q S E D D G D Q V
VL[ZHHNV RI WKH FRPELQDWLRQDO WUHDWPHQW WUHDWPHQW 772 VKDPSRQLQJ
772 H\HODVK VFUXEELQJ PRV RI WKH SDWLHQWV ZHUH IUHH RI 'HPRGH[
GLVFRPIRUW DQG 'HPRGH[XSDULVIRVXQV R R OLVK R Q X P D Q G 'HPRGH[EUHYLV DV D
GLVFRPIRUW DQG ZHUH QRW 'HPRGH[IUH H ZHUH WKH RQH V Z K R K D G W R R U
FRPSOLDQFH ZLWK WKH WUHDWPHQW RU ZHUH IRUFHG WR GLVUXSW WKH WUHDWPH
GXH WR LQWHQVH 772 RFXODU LUULWDLWLRQ

&RQFOXVLRQ

,Q FRQFOXVLRQ 'HPRGH[VSS PD\ FDXV
SDOSHEUD VNLQ OHVLRQV 6LQFH RXU
GHPRGLFRVLV WR EH TXLWH VSUHDGDEOH
ZLWK FKURQLF QRQ GLDJQRVHG EOHSKDU
'HPRGMSS 7HD WUHH RLO WUHDWPHQW
FKRLEH D]D]QV REXODU GHPRGLFRVLV
DQGDUGLVHG PHWRGRORJ 'HW 2UDO
WUHDWPHQW DQG WUHDWPHQW