

OHEHDXURJHU#\DKRR IU

5HF GDMRY

\$FF'GFDWH 3XE GD\DR

&RS\ULJKW (/HEHDX 5 HW DO 7KLV LV DQ RSHQ DFFHVV DUWLFOH GLVWULEXWHG XQGHU WKH WHUW
XVH GLVWULEXWLRQ DQG UHSURGXFWLRQ LQ DQ\ PHGLXP SURYLGHG WKH RULJLQDO DXWKRU DQG VRXU

\$EVWUDFW

3XUSRV\ GHV FULEH RXU H\SHULHQFH LQ WKH PDQDJHPHQW RI JLDQW LQJXL
HSLGHPLRORJLFDQ FOLQLFDQ SURILO WUHDWPHQW DQG RXWFRPH DIWHU WUHDWPHQW

0HWKR\ V\HVFULSWLYH DQG UHWURVSHFWLYH VWXG\ ZDV FDUULHG RXW RI JLDQW
DQG DW %RXDN\ WHDFKLQJ KRVS LWDO LQ WKH FHQWUDO SDUW RI RXU FR
PHGLFDQ PLVVLQJ IRU KHUQLD WUHDWPHQW RUJDQLJHG E\ D QRQ JRYHUQHPHQW
ZDV GHVLJQH G LQFOXGLQJ IRU HDFK SDWLHQW VRFLR GHPRJUDSKLF GDWD FOL
WUHDWPHQW

5HVXOW\ VLQJ WKH SHULRG XQGHU VWXG\ SDWLHQWV ZLWK JLDQW LQJXLQR VF
DJHV RI RXU SDWLHQWV UDQJHG IURP WR \HDUV ZLWK D PHDQ DJH RI \HDU
WR \HDUV ZLWK D PHDQ RI \HDUV 5HDV RQV IRU ODWH SUHVHQWDWLRQ ZH
+HUQLD ZDV LUUHGXFLEOH LQ IRXU SDWLHQWV \$ SUH RSHUDWLYH SURJUHVVLYH S
SDWLHQWV 'XULQJ RSHUDWLRQ UHGXFWRQ RI WKH KHUQLD FRQWHQW LQWR WKH
WKLV SDWLHQW D GHEXONLQJ OHIW KHPLFROHFWRP\ ZLWK FROR UHFWDQ DQDV
FRQGXFWHG LQ DOO SDWLHQWV ZLWK /LFKWHQVWLQ SURFHGXUH Q 6KRXOGL
OF 9D\ V SURFHGXUH Q DQG 6WRSSD\ V SURFHGXUH Q \$EGRPLQDO FRPSDUW
RSHUDWLYHO\ LQ WKUHH SDWLHQWV 7ZR RI WKHP XQGHUHQW HPHUJHQF\ PLGOL
FORVXUH DQG WKH WKLUG SDWLHQW GLHG RQ WKH RSHUDWLRQ WDEOH ,Q SRVW R
SDWLHQWV VXSSXUDWLRQ RI WKH LQJXLQDO ZRXQG LQ SDWLHQWV DQG V
OHQJWK RI KRVS LWDO VWD\ ZDV GD\ GD\ WR GD\ DQG DIWHU D PHDQ IR
PRQWK WR PRQWK QR UHFVUHQFH ZDV REVHUYHG

&RQFOXVLRQ *LDQW LQJXLQR VFURWDO KHUQLDV DUH FRPPRQ LQ \$IULFD DQG
FRQVWUDLQW DQG ODFN RI DZDUHQHVV DUH UHVS RQVLEOH IRU GHOD\ LQ SDWLHQ
DQG FRUHHODWHG ZLWK VLJQLILFDQW PRUELGLW\ DQG PRUWDOLW\ GXH WR LQFUHI
FDUH LQ UXUDO DUHDV FRXOG UHGXFH WKH RFFVUHQFH RI WKLV FRQGLWLRQ

.H\ZRUG\VDQW LQJXLQR VFURWDO KHUQLD +HUQLRSODVW\ +HUQLRUDSK\
\$EGRPLQDO FRPSDUWPHQW V\QGURPH HGXQGDQW VFURWXP ZKLFK OHDYH URRP

,QWURGXFWRQ

,QJXLQDO KHUQLD LV RQH RI WKH PRVW FRPPRQ HPHUJHQF\ V\QHLVWQ\ KDG
RSHUDWLRQ ZRUOG ZLGH DFFRXQWLQJ JLDQW LQJXLQR VFURWDO KHUQLD GHYHOR
> @ ,Q SDUW RI \$IULFD WKH DQRUPDQ LQFLGHQFH RI LQJXLQDO KHUQLD LV DV
KLJK DV SHU SHRSOH > @ +RZHYHU OHVV WKDQ DUH
DFWXDOO\ UHSDLUHG UHVXOWLQJ LQ PDQ\ SDWLHQWV GHYHORSLQJ ORQJ VWDQW
LQJXLQR VFURWDO KHUQLD WKH SUREOHP RI WKH SDULHWDO UHSDLU DQG WUHDWPHQW

U

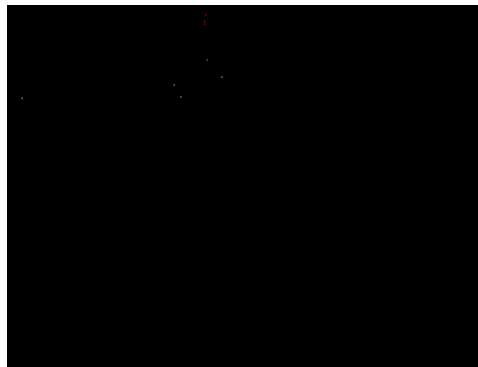
LDQW LQJXLQR VFURWDO\ KHUQLD GHYHORSLQJ WKH
E\ WKH DXWKRUV DW %RXDN\ WHDFKLQJ KRVS LWDO LQ WKH
WKH FRXQWU\ & WH Gd,YRLUH DQG GXU
SURJUDPPHV IRU KHUQLD WUHDWPHQW \$SFp

D EHG XUEDQ SXEORVSLRWSQWLD/OD WHUWLDU\ UHIHUUDO
FHQWUH DQG VHUYHV XUEDQ DQG UXUDO SRSXODWLRQ IURP %RXDNHdV
DJJORPHUDWLRQ EXW DOVR IURP WKH ZKROH FHQWUDO DQG QRUWKHUQ SDUWV I
WKH FRXQWU\ %RXDN« FLW\ LV ORFDWHG LQ WKH FHQWUDO SDUW RI WKH FRXQ
,YRU\ &RDVW 'XULQJ WKH IUHH UXUDO PHGLFDO PLVVLRQV SURJUDPPHV IRU
KHUQLD WUHDWPHQW RXU VXUJLFDO WHDP PRYHG LQ UXUDO FRPPXQLWLHV
SDWLHQWV ZHUH WDNLQJ LQ FKDUJHLQ WKH KRVSLOWDO RI WKH QHDUHVW WRZQ
VXUJLFDO WHDP RI WKH ORFDO KRVSLOWDO ZDV LQYLWHG WR MRLQ RXU WHDP VR
WKH SDWLHQWV ZHUH PDQDJHG WRJHWKHU \$W WKH HQG RI WKH PLVVLRQ WKH OR
VXUJLFDO WHDP HQVXUHG WKH SDWLHQWV IROORZ XS

\$ VWUXFWXUH TXHVWLRQQDLUH ZDV GHVLJQHG LQFOXGLQJ IRU HDFK SDWLHQW
VRFLR GHPRJUDSKLF GDWD DJH RFFXSDWLRQ UHJLRQ RI UHVLGHQFH UXUDO
RU XUEDQ ZKHWKHU WKH KHUQLD LPSHGH TXDOLW\ RI OLIH FOLQLFDO
SUHVHQWDWLRQ GXUDWLRQ RI VPSHWPHG SULRU WR SUHVHQWDWLRQ VLGH
UHDVRQ IRU ODWH SUHVHQWDWLRQ UHDVRQ ZK\ WKH SDWLHQW LV QRZ SUHVHQW
ZKHWKHU SULPDU\ RU UHFUXUHQFH KHUQLD FR PRUELGLWLHV LI WKH SKDOOXV
FRPSOHWHO\ EXUULHG E\ WKH PDVV LI WKH SDWLHQW LV DEOH WR UHGXFH WK
PDVV WKH ORFDO DVSHFW RI WKH VNLQ \$6\$ VWDWXV > @ W\SH RI DQHVWKHVL
DQG VXUJLFDO SURFHGXUHV SRVWRSHUDWLYH FRPSOLFDFWLRQV KRVSLOWDO VW



)LJXU/HV VLGHQW LQJXLQR MFBRWDOOXKHUQLD
SDUWLDOO\ EXULHG



)LJXU/HV VLGHQW LQJXLQR VFURWDO WK
WKH LQJXLQR VFURWDO KHUQLD UHDFKHG
KHUQLD



)LJXU/HV VLGHQW LQJXLQRVFURWDO KHUQLD ,Q WKLV FDVH WKH
SKDOOXV LV QRW HQJXOIHG

WKH EHVW PHWKRG WR VWUHQQJWKHQ WKH SDULHWDO GHIHFW \$V VHYHUDO SDW
DUH XQDEERUWKWHRFRVW RI SURWKHWLF PDWHULDO > @ PHVK SURFHGXUH
ZDV XVHG LQ RQO\ RQH WKLUG RI RXU SDWLHQWV >/LFKWHQVWHLQ SURFHGXUH
Q 6WRSSDdV SURFHGXUH Q @ 7UHDWPHQW RI UHGXQGDQW VFURWXP LV
D SUREOHP DQG KRZLWUHQPHDQZLDXWKWU WR DQRWKHU
> @ ,Q RXU VHULHV DOO SDWLHQWV KDG VFURWDO FRQVHUYDWLRQ DQG
HYROXWLRQ KDV PDGH WR VFURWDO UHWUDFWLRQ 6FURWDO KHPDWRPD DQG
VHURPD DUH RWKHUV PDMRU SRVWRSHUDWLYH FRPSOLFDFWLRQV LQ WKH
PDQDJHPHQW RI *,6+ > @ :H IRXQG RI VFURWDO KHPDWRPD
DQG RI VHURPD 8QOLNH WR \$EGXO > @ ZKR IRXQG RI SRVW
RSHUDWLYH KHPDWRPD DQG (O 'HVVRXNL > @ ZKR UHSRUWHG RI
SRVWRSHUDWLYH VHURPD 7R GHDO ZLWK WKRVH FRPSOLFDFWLRQV YDULRXV
GHYLFHV VXFK DV GUDLQLQJ DQG WKH EDQGDJH DUH XVHG E\ VHYHUDO DXWKRU
> @

H UHFVUHQFH UDWL LV YDULDEOH DQG PD\ UHDFK RI FDUV > @
\$VHD PHDQ IROORZ XS SHULRG RI PRQWKV ZH GLG QRW QRWLFH DQ\
UHFVUHQFHUHQHLDWLRQ RI WKLV VWXG\ LV WKH VKRUW GXUDWLRQ RI IROORZ
XS FDUULHG RXW VR IDU FRQVLGHULQJ WKH KLJK UDWL RI UHFVUHQFH DVVRFLO
ZLWK KHUQLRUDSK\ SURFHGXUH

&RQFOXVLRQ

*LDQW LQJXLQR VFURWDO KHUQLDV DUH FRPPRQ LQ \$IULFD DQG