

**Caaarshowga C:
Aasaas Tasmada Fahanka Ku Saabsan Kahortagga, Aqoonsiga Cudurka,
iyo Maamulidda Cudurka**

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Hordhac

HCV waa fayrus ka dhasha dhigga. HCV waxa uu jirka soo gala isaga toos dhiigga u soo mara. Fayruska waxa uu soo hujuumaa unugyada beerka, sidaasina halkaas ku tarmaan. HCV waxa uu huriyaa beerka wuxuna dilaa unugayada nool ee beerka. Illaa 80% ee dadka marka cudurka HCV uu bilawga yahay aya mar dambe isu badalaya mid infekshan ba'an oo dabadheraada – taaso macnaheedu yahay in cudurka uusan meesha ka baxaynin illaa lix bilood. Dadka badankooda ee qaba HCV ba'an uma eka kuwo cudurka qaba si caadi ayayna u nool yihiin.

Laakiin, inta u dhaxaysa 10–25% ee dadka qaba HCV ba'an, cudurka waxa uu ku sii faafayaa mudoo u dhaxaysa 10–40 sanadood, taaso dhibaato weyn u geysata beerka, cirrhosis (scarring), iyo kaansarka beerka. Maanta, HCV waa qaybta ugu wayn ee dalka Maraykana oo sababa in dadka beerka laga baddalo. Wakhtiga xaadirka ah ma jirto tallaaf ama wax daweyya HCV, laakiin waxaa jira siyaabo kale ee wax lagu daweyyo oo meesha ka saari kara feyruska iyo/ama gaabiya ama joojiya cudurka ku fidaya dadka qaarkood. Machadka Qaranka ee Caafimaadka (National Institutes of Health (NIH) ayaa qiyaasa in illaa affar malyan ee Maraykan ay qabaan infeshkanka isu badala HCV. Maraykanka sanad kasta waxaa u dhinta HCV waxaa lagu qiyaasay 8,000–10,000 wax ka yimaada HCV dhibaatooyinkiisa. Tiradaan waxa la filayaa in saddex jibbaaranto 10–20 sanadoo ee soo socda. HCV ayaa ah sababta ugu weyn ee keenta in dadka Marayknka beerka laga baddalo.

Beerka

Beerka waa xibinta ugu weyn jirka xibnaha gudaha, wuxuuna ku yaallaa saableyda dhinaca midig ee caloosha. Waxaa misaankiisa lagu qiyaasaa 3 rodol wuxuuna cad ahaan la egyahay kubadda cagta ee Maraykanka laga cayaaro. Beerka waxa uu masuul ka yahay waxtar 500 gaaraya oo aan laga maarmin. Waxaa uu shiidaa waxkasta oo la cuno , hawo iyo waxa jirka uu qaato.

Beerka waxa la cuno iyo waxa la cabbo ayuu u baddalaa quwad iyo tiirka dhisa murqaha, hoormoonka, meelaha xinjirrada ka dhashaan, iyo diffaaca xibanaha jirka. Waxaa uu kaydiyaa fitaamino, nafaqo iyo sonkor wakhti dambe la isticmaalo. Unugyada beerka waxa ka abuurma dheecaan, kaaso jirka u fududya in uu dheef-shiidiida iyo dhuuqa nafaqada. Beerka waxa uu ka nadiifiyaa waxyaabaha jirka u daran. Isaga ayaa isku koriya unugyadiisa—caddad illaa $\frac{3}{4}$ mudda ayay beerka ku qaadataa inuu dib uu soo abuurmo dhowr usbuuc gudahooda.

Cagaarshoga waxaa sida fudud lagu macneeyo huridda beerka. Waxa dhici karta in fayrusyo ay sabab u yihiin, kimiko sun wadata, daroogo, ama waxyaabo kale. Nooca ugu badan ee cagaarshowga cudurka weyn leh waa feyruska cagaarshowga A (HAV), feyruska cagaarshowga B (HBV), iyo HCV. Saddexdan fayrus waxa kaliya oo ka dhaxeeya waa iyaga oo saamaynaya beerka.

Qaadista iyo Kahortagga HCV

Qaadista HCV

HCV waxa layska qaada marka si toos ah dhiigga uu dhiig kale ku qasmo. Siyaabaha laysku qaadsiiyo waxaa kamid ah in la wada isticmaalo daroogada laysku duro iyo daragooga aan laysku durin (cirbadaha, digsiyada wax lagu kariyo, tourniquets, dhuunyaraha cabitaanka, tuboyin, iwm.) Cirbada jirka lagu sharraxo, jirka la dalooliyo, iyo xitaa cirbadaha lasyku daweeyo ee jirka lagu mud-mudo waxa ay faafiyaan HCV. Wadaagista waxyaabaha gaarka sida waxa garka lagu xiiro, rumayga, ama ciddiyaha simaha uma badna in ay yihiin siyaabaha laysku qaadsiiyo haddana waa wax dhici kara. Wixii ka horreeyey 1992, dadka badankooda waxa ay cudurka HCV ka qaadi jireen dhiigga ama qalabka dhiibka lagu qaado. 1992 ayaa la soo saaray tijaabada lagu aqoonsanayo unugyada dhiigga ee ka hortaga HCV. Wakthigaas wixii ka dambeeyaya dhiigga kaydka ah waa la siiyay. Maantay in aad HCV ka qaaddid dhiig infekshan leh waxa ay ka yartahay 0.01%.

Shaqaalaha daryeelka caafimaadka waxa ay halis u yihiin cudurka HCV sababta oo ah waxa dhici karta in si lama filaan ah ay isku duraan cirbad leh dhiigga qof cudurka qaba. Militarigii hore ee la tallaalaay, ama la cirbadayey, ama la siiyay daryeel kale ee caafimaad iyaga oo dagaal ku jira waxa ay halis weyn u yihiin in ay fayruska qaadaan.

Hooyooyinka qaba HCV ee ilmahooda qaadsiiya inta aanay dhalin ama dhalashada kaddib waxaa ay qiyaastii dhacdaa 5-6% ee dhalashada hooyooyinka qaba HCV+. Halista ilmaha in la qaadsiiyo waxa ay ku xirantahay in la qaaddo infakshanka HBV ama HIV, taaso ay u badantahay in HCV ay u gudbiyaan ilmahooda. Cilmi baarisayada qaarkood ayaa muujiyey in HCV laga helo caanaha naaska, laakiin naasnuujintu ay tahay mid halista ka baxsan.

Waddada laysku qaadsiiyo waxa ay kor u kacday 10% dadka qaba HCV ay yihiin kuwo aan la ogayn. HCV layskuma qaadsiiyo waxyaabaha sida hindhisada, qufaca, habsiinta, ama marka la wadaago qalabka wax lagu cuno ama galaasyada wax lagu cabbo.

HCV iyo Galmada

Boqolkiiba dad aad u yar ayaa HCV qaada marka ay galmoodaan ayagoo aan isticmaalin salbatiibo. Dadka lagu tilmaamo kooxaha “halista weyn ku jirta” (qaanisyada, dhillooyinka, dadka dhowr qofood la galmooda, iyo dadka qaba STD), in galmada ay isku qaadsiiyaan waa wax caadi ah.

Kahortagga HCV

Ha la wadaagincirbadaha daroogada laysku duro ama wasakhda daroogada kale sida, waxa garka lagu xiiro, rumayada, ciddiya jaraha, cidiya simaha, ama shay kasta oo dhiig yeelan kara cidna ha la isticmaalin. Iska hubso in aad qalblka maqaarka lagu sharraxo, jirka lagu duro, ama cirbadaha yar yar jirka laga taago, in ay yihiin kuwo la soo sifeeyay. Nabarada iyo dhaawacyada oo idil waa in la daboolo. Inkasto isqaadsiinta galmada ay aad u yartahay, haddana, waxa aad halistaasi ku sii yarayn kartaa adiga oo isticmaalaa

galmada taxaddir leh, taaso ay kamid tahay isticmaalka salbatiibada. Akhbaar laga soo xigtay Xarunta Kahortagga iyo Koontoroolka Cudurrada (Centers for Disease Control and Prevention (CDC), haddii aad tahay qof noloshiisa deggantahay, xiriir galmo la sameeya hal qof iyo in aadan rabin in aad wax ka badashid, inkastoo loo baahanyahay in laba ay wax ka dhaxeyaan in ay ka wada hadlan fursadda galmada difaaca leh haddii labada qof uu mid ama labadaba ay ka baqayaan in cudur lays qaadsiiyo. Haddii qofka dumarka ah ay qabto HCV, waa in ay galmada iska ilaaliso marka ay ku jirto caadada billaha . Ilkaha oo si fiican loo daryeelo waxa ay kaa dhowraysaa in dhiig cirridka ka yimaado, taasoo ah waddo kale oo cudurka laysku qaadsiiyo.

Dhakhtarkaaga iyo dhakhtarka ilkaha iyo daryeelayaasha kale ee caafimaadka u sheeg haddii aad tahay qof qaba HCV. Haddii aad tahay qof dumar ah ee qaba HCV, la hadal dhakhtarkaaga inta aadan ku talagal in aad uur qaadid.

Calaamadha Lagu Aqoonsado HCV

Dadka badankooda calaamado yar ayaa lagu arka amba calaamaa ma leh marka u infeshanka HCV marayo meel halis ah. Dadka qaba HCV dabadheeratay (karoonik) sidoo kale maba yeeshaan calaamada iyadoo noolashoodu caadi u muuqato. Laakiin kuwa nugul waxay yeelan karaan calaamado sida lallabbada, daal, xummad, madax-xanuun, rabitaanka cuntada oo ka yaraata, calool-xanuun, xanuun murqaha iyo kalagoysyada. Muddo ka bacdi (sida badan sanado ama xitaa dhowr tobnad) dadka qaba HCV ee ba'an waxaa kordhi kara calaamadaha qaarkood oo la la xariira waxyeellada beerka. HCV ee ba'ani wuxuu kaloo kulansiiyaa xaalado kale oo baahsan oo la xariira wayellada beerka.

Cagaarshoga Ba'an ee C

- Jirrooyin sida hargabka oo kale ah
- Daal (mid fudud iyo mid culus)
- Qandho
- Dhididka habeenkii
- Rabitaanka cuntada oo yaraata
- Lallabbo
- Mantag
- Shuban
- Cagaarshow
- Caloosha oo fadhida
- Madax xanuun

Calaamaha ay Soo Sheegaan Dadka Qaba HCV

- Xanuun murqaha iyo kalagoysada
- Calool xanuun
- Calool fuur

Cagaashowga C ee Ba'an

- Daal (mid fudud iyo mid culus)
- Qandho
- Rabitaanka cuntada oo yaraata

- Lallabbo
- Caloosha oo fadhida
- Madax xanuun
- Xanuun murqaha iyo kalagoysada
- Calool xanuun
- Niyo-jab
- Isbaddallo Xooggan b
- Xasuusta oo Lunnta

Heerka Dambe ee Cagaarshowga C iyo Cirrhosis (cudur beerka ku dhaca)

- Daal (fudud ama badan)
 - Qandho
 - Rabitaanka cuntada oo yarada
 - Lallabbo
 - Mantag
 - Dareeraha oo Ceshooma
- Calaamadaha HCV
- Kaadi badan
 - Cagaarshaw
 - Caloosha Fadhida
 - Madax xanuun
 - Xanuun murqaha iyo kalagoysyada
 - Calool xanuun
 - Dibbiro
 - Niyo-jab
 - Isbaddallo xooggan
 - Garashada oo xumaata
 - Adkaysi la,aan
 - Isku buuqis maskaxda
 - Wareer
 - Aragtida kala jeedda

HCV Faafidda Cudurka

Cirrhosis waa hab ay unugyada beerka ay waxyelloobaan ama ku dilmaan laguna baddalo unugyo xumaaday. Marka ay sii kordhaan unugyada xumaaday waxa ay wax u dhimayaan socodka dhiigga dhexmara beerka, taaso sii kordhinaysa dhimashada unugyada fiican iyo beerka oo howshooda si ba'an hoos ugu dhacdo.

Compensated Cirrhosis macnaheeda waxa ay tahay in unugyada beerka ay si xun u hallaabeen laakiin uu beerku weli sii wadi karo hawlaha badankooda, dadka uu ku dhaco “compensated cirrhosis” waxa lagu arkaa calaamado aad u yar amaba waxba laguma arko.

Decompensated Cirrhosis macneheeda waa in beerka uu si baahsaan u hallaabay uuna joojiyey hawlihi oo dhan. Dadka uu ku dhaco “decompensated cirrhosis” waxaa badanaaba uu isu baddalaa dhibaatooyin horleh sida dhiig karka xididdada maraya beerka (portal hypertension), “varices” (xididdada dhiigga qaada oo caadadisma iyo iyago

tabardarreeya) ee hungurigara dhuunta (halka ay maraan waxa la laqo) iyo caloosha, dhiigbaxa xibnaha gudaha, “ascites” (dheecaan isku aruura), iyo xalaado kaloo nafta halis u ah. Waxa kaloo la soo gudboonaanaya jaahwarer xagga maskaxda oo wax laga qaban karo.

Kaansarka beerka wuxuu kordhaa xilliyada dambe ee cudurka HCV, caadi ahaan 25–30 sanadood kaddib. Nooca kaansarka beerka ee loo yaqaanno HCV waxaa la yiraahda “hepatocellular carcinoma” (HCC).

Xaaladaha La Xiriira HCV

Waxa jira tiro xalaado kala duwan ee la xiriira HCV. Xalaadahaan qaarkood waxa la yiraahda xaaladaha qaabka isdifaaca xubnaha jirka, kaaso xibnaha jirka ay dagaal ku qaadayaan isla unugyada jirka. Xalaadahaan waxa mararka qaarkood lagu arkaa dadka qaba HCV dabadheeraada oo uu kamid yahay xaaladda aan caadi ahayn ee Sjögren’s (oo lagu yaqaanno indhaha iyo afka oo qalala) xaaladaha kelyaha ee loo yaqaanno “glomerulonephritis”, iyo xaaladaha maqaarka sida “lichen planus” (oo gaar u ah dhaawacyo caddaan ah ama buuran) iyo “porphyria cutanea tarda” (oo gaar u ah cuncun ka imaada qorraxda).

Xaaladaha kale ee la xiriira waxaa kamid noocyada lafa xanuunka (kalagoosyada oo hura), arthralgia (xanuunka kalagoosyada), cudurka unugyada korriimada, “vasculitis” (xididdada dhiigga qaada oo hallaaba), iyo “cryoglobulinemia” (borotiinka dhiigga oo sare u kaca oo fadhista kelyaha, maqaarka iyo meelaha ay ku dhammaadaan xididdada dareemayaasha). Xaaladaha ugu daran waxa ay la xiriiraan waqtiyada dambe ee cudurka HCV, marka uu beerka hallaabo oo uusan sidii laga rabay u shaqaynaynin. Dad badan oo qaba HCV weligood xaaladahaan lama soo gudboonaadaana. Dhakhtarkaaga la xiriir haddii aad isku aragtid waxyaabo aan caadi ahayn.

Cudursheega HCV

HCV Antibody Tests HCV ELISA: waa tijaabo fudud oo dhiigga lagaa qaadayo si lagu ogaado haddi aad leedahay unugyada la diriras HCV.

RIBA HCV: waa tijaabo labaad ee unugyada wax la dirira oo dhici karto in la sameeyo kaddib marka la qaado tijaabada ELISA si lagu xaqiijiyo jiritaanka unugyada la dirira HCV. Tijaabdan waxaa caadi ahaan lagu sameeyaa dadka tijaabadu ay sheygayso in ay qabaan HCV Elisa laakiin ay u badantahay in ay halis u yihiin waxyaabaha laga qaado HCV.

Viral Load Tests: Tijaabada “Viral load tests” waxa ay cabbiraysaa cadadka HCV ee dhiigga ku jira. Viral load baaristiisa waxaa lagu hubiyaa cudurka HCV in uu jiro, si lagu saadaaliyo jawaabta laga helayo daweyntiisa, iyo cabbirka sida fiican oo daawada wax uga qabanayso la dagallanaka fayruska inta ay daaweyntu socoto.

Waxaa lagu taliyaa in la xafido koobiyada tijaabada shaybaarka iyo natijada xinjirta la jaray si mustaqbalka loo adeegsado. Tijaabada hoose waxaa lagu ogaanayaa haddii aad qabtid cudurka HCV iyo heerka uu cudurka u faafayo.

Tijaaboyinka Unigyada Nooca Hiddowayaasha (Genotype Tests)

Tijaaboyinka Genotype waxaa loo isticmaalaa si lagu ogaado nooca HCV ee aad qabtid. Akhbaartan waxa ay wax u taraysaa waxa ku saabsan go'aannada daaweynta, sida inta ay la egtahay daawada la qaadanayo, muddada daaweynta ay qaadaynayso, iyo fursadaha ka jawaabaysa daaweynta.

Tijaaboyinka Kiimikada/Waxqabka Beerka (Liver Biochemical/Function Tests)

Waxaa jira dhowr tijaabo oo loo isticmaalo si lagu agaado sida uu beerkaagu u shaqeeyo. Cabbirka inta badan la isticmaalo waa “alanine aminotransferase” (ALT) iyo “aspartate aminotransferase” (AST). ALT iyo AST waa kiimiko falgalka dejisa ee dhiigga lagu sii daayo marka uu beerka hallaabo. Waxa ay heer sare ka yihiin dadka qaba cudurka HCV. Dad badan oo qaba HCV heer dhexaad sarreeya ee labadaan kiimiko falgalka dejiya, oo ah tilmaanta ugu horreysa ee sheegysa in uu cudurka jiro.

Heerka xaaladaha aan caadiga ahayn waxa dhici karta in ay noo sheegayso faafidda cudurka, iyo waxyaabaha kale ee aan caadiga ahayn. Waxyaabo badan sida isticmaalka daawada iyo qamriga shaybaarkua wuxuu ka sheegaya naatiijoyin aan caadi ahayn. Inta aan go'aan laga gaarin waxa ay natiijada noqon doonto, la xiriir daryeelaha caafimaadka.

Xinjirrada Beerka Laga Jaro

Xinjirrada beerka laga jaro waxa ay cabbirayaan heerka uu gaarsiisan yahay xanuunka, inta ay la egyihiin unigyada hallaabay, iyo caafimaadka guud ee beerka. Waxa kale ee loo isticmaali karaa in ay ku caawiyaan si lagu oogado haddii daaweynta loo baahanyahay. Habka inta badan la isticmaalo waxa ay tahay inla kabaabyeeyo maqaarka iyo muqurra kaddibna si dhaqsiya ah beerka lagu duro cirbad dheer ee dhuuban si lagu soo jaro xinjirta. Dadka badankiisa waa ay ka cabsadaan habkaan, laakiin cilladda ka timaaddaa ayaa aad u yar. Haddii aad ka walaacsantahay habkaan, weydiiso dhakhtarkaaga daawa yar oo ku dajisa inta aan xinjirta lagaa soo jarin iyo kaddibna daawo xanuunka baabi'isa.

HCV Fursadaha Daaweynta

Maanta, heerkadaryeelka ee lagu daaweyo HVC waxa ay tahay isku- darka “pegylated interferon” oo la soo raaciyo “ribavirin”. Cilmibaaris socota waxa lagu soo saarayaa daawoyin cusub oo waxtar badan si markaasi loo kordhiyo fursadaha rajada laga qabo ee cadadka buukaannada qaba HCV.

Waxa kale oo jira siyaabo kale oo barbar socda ee daaweyn ah oo dadka ay u isticmaaleen si lagu daaweyo cudurka HCV, tusaale, “milk thistle” (silymarin) iyo “licorice root” (glycyrrhizin). Daaweynta dhirta iyo kuwa kale waa in dhakhtarkaaga aad kala hadashid.

Daawoyinka Farmashiyada

Pegylated interferon iyo Ribavirin. Pegylated interferon (PEG) waa nooc hawlgalkiisa qaadata muddo dheer ee interferon oo laysku duro usbiica mar. PEG waxa ay ku sii wadaysaa heer joogto ah ee “interferon” ku haynysaa dhiigga iyo waxa ay si fiican u yaraynaysaa awoodda ay HCV in la eg sii samayso. Ribavirin waa daawo afka laga qaato oo fayruska kahortayga waxaana lala isiticmaala “interferon” si ay u daaweyaan cudurka HCV. Ribavirin keligeed waxba kama qaadayso HCV.

Isku-darka “pegylated interferon” iyo “ribavirin” waxa hadda loo haystaa sida caadiga ah ee lagu daaweyo HCV. Hal usbuuc ayaa cirbad lagu durayaa maqaarka. Qiyaasta ribavirin ee hal mar la qaato waxa ay ku xirantahay culayska qofka.

Cabiridda Jawaabta Daawada

Dadka la siiyo daaweynta HCV waa in si joogto ah laga qaado tijaabo si lagu ogaado dhibatoyinka ka imaan kara iyo in la hubiyo in daawa qaadashada ay natiijo leedahay. Haddii uu qof wax jawaab laga helin muddo saddex usbuuc ah daawada la siiyay, daawayn kale ee fayruska ma saarayso. Dhakhaatiir badan waxa ay ku taliyaan in wakhtigan la joojiyo daawada la qaato. Laakiin, natiijoyinka qaarkood waxa ay ku talisay in “interferon” ay yarayn karto unugyada hallaabaya iyo jirrada sii kordhaysa iyo caafimaadka beerka uu soo roonaado xitaa haddii fayruska meesha laga saari waayo.

Jawaabaha fayruska waxa lagu cabbiraa sida uu qofka heerka cualyska fayruska uu kaga jawaabay daaweynta. Marka uu qof culayskiisa fayruska aan la ogaan karin kaddib marka laga daaweyay HCV, tan waxa loo fasiraa in ay tahay jawaabta fayruska. Haddii fayruska aan lagu ogaan karin wax lix bilood ka dambeeya, waxaa markaa la isticmaalaya erayga ah waxaa la sii wadaya isticmaalidda jawaabaha fayruska (SRV).

Baarista Daaweynta Farmashiyaha

Daaweynta HCV waxa ay la darastay horumarin heer sare ah, iyadoo fayruska jiritaankiisa la xaqiijiyaya oo kaliya 1989. Laakiin, fursadaha daaweynta waxa uu yeelaan karaa dhibaatooyin kale oo feer socda daaweynta iyo daaweynta oo markasta aan lagu guulaysan.

Muddada Daaweynta iyo Daawoyinka

Muddada caadiga ee daaweynta ee cagaarshoga C ee daba dheeraada waa 48 usbuuc marka la qaato genotype 1, iyo 24 usbuuc genotypes 2 iyo 3.

Digniinta Ribavirin

Ribavirin ayaa laga sheegay in ay sababto ilmaha la dhasha xaalado ba’an iyo ilamaha oo dilmal.

Dumarka jira da’da ay ilmaha ku dhalaan, ninka ay lammaanaha yihiin, iyo dumarka lammaanaha la ah niman bukaan ah ee qaata Ribavirin waa in ay isticmaalaan laba nooc ee uurka celiya inta ay daaweyntu socoto iyo muddada lixda bilood ee ka dambeeya wakhtiga dabagalka ah.

Tallaalada HCV

Hadda lama hayo wax tallaal logu talagalay HCV, inkastoo la hayo tallaalada HAV iyo HBV. Waa ay adagtahay si loo sameeyo talaalka HCV waxaana sabab u ah marka fayruska uu leeyahay noocyo kala duwan ee noocyada unugyada isirka iyo sida fudud ee uu isku bad-baddalayo, waqtiga cudurka. Xoogaa horumar waa la sameeyay, haayeeshe tallaal wax ku ool ah ee HCV lama filayo sanooyinka 5-10.

Saadaalinta Jawaabaha Daaweynta

In la raaco daaweynta HCV waa shay muhiim ah si lagu gaaro cadadka heerka ugu sarreya ee lagu helayo jaawaabta daaweynta. Marka lagu daaweynayo interferon iyo ribavirin waxa ay u badantahay in ay ka saarto HCV haaddi qofka uu leeyahay nooca genotype ee aan ahayn 1, culays hoose ee faysruka HCV, cudurka leh HCV ee muddada gaaban ah, cudur dhexe ee loo dulqaadan karo, dumar tahay, jir iyo joog caafimaad qaba iyo da' yar. Marka horeba ee culeyska fayruska uu hoos uu u dhaco waxa ay saadaal u tahay jaawab guul leh marka ay daaweynta dhammaato. Tasmadan waxaa la isticmaali karaa in uu ka caawiyaan si loo diyaariyo daaweyn ama lagu joojiyo daawada aan waxba taraynin. Laakiin dhakhaatiirta qaarkood waxa ay rumaysan yihiin in daaweynta la sii wado, sababto ah dadka qaarkood waxtarka daaweynta ayay dareemayaan ama caafimaadka beerka ayaa soo roonaanaya xitaa haddii aan la sheegin karin culeyska faysruska ama uu ka yaraado cadadka la soo jeediyaya.

Jimicsiga waa qaybta ugu muhiimsan ee caafimaadka lagu ceshado, waana wax run ah inta ay daaweynta socoto. Dhaq-dhaqaaqa jirka waxa ay caawinaysa niyadsami iyo qofka in uu u soo jeedo hawsha uu hayo iyo wanaagsanaanta ay sii korodhiso. Meel dhexaadnimada waa shey muhiim marka jimicsiga la samaynayo. Kuwa ugu fiican waxaa kamid ah iskala bixinta, socodka, yooga, iyo hawlaha kale ee aad adiga samaysid. Dadka qaarkooda, dhibaataad jimicsiga ka timaada waxa ay ka xunyihiin marka laba bilaabo in daawada la qaato waxayna si yaraanaysaa muddo kaddib. Sababta ugu badan ee loo joojiyo qaadashada daaweynta HCV waa dhiig yarida (unugyada dhiigga ee guduudan oo tira yar), unugyada platelet oo yar, iyo unugyada dhiigga qaada ee cad oo yar. Waxaa jira daawooyin la isticmaalo si lagu xaddido xaaladahaan oo dhakhtarkaaga uu kuu soo qorayo.

Dadka qaarkooda xibnaha korriimada aya xumanaaya inta la qaadanayo daaweynta interferon. Xaaladda hawlaha xibnaha korriimada waa in si fiican looga warhayo ka hor inta aan la billaabin daaweynta iyo saddexda biloodba inta daaweynta ay socoto. Dadka badankooda, hawlaha xibnaha korriimada waxa ay sida caadiga dib ugu soo laabanayaan marka la joojiyo qaadashada daawada, laakiin dadka qaarkood waxa dhici karta in dhibaatooyin aan waxba laga qaban karin ee ku dhaca xibnaha korriimada oo u baahan in daawo loo sii qaato.

Maamulidda Dhibaatooyinka Ka Yimaada Daawo Qaadashada

Dhiibata ugu badan ee ka timaada daawo qaadashada ee interferon iyo ribavirin waxaa kamid ah jirro lamid ah duray meeldhaxaad ah, xanuunka murqaha iyo kalagoosyada, lallabbo, madax xanuun, daal, cuuntada oo laga go' o, jirka oo qalala, walaac, niyadjab, iyo hurdo la'aan. Cudurradaan qaarkooda waxaa lagu daaweyn karaa qaadashada ibuprofen ama acetaminophen oo wax yar la qaato (2 garaam ama ka yar maalintiiba).

Caddad badan ee acetaminophen waxa ay sumayn karaan beerka. Dadka dareema waalac, caro badan, ama niyadjab waxaa caawin kara daawo meeldhexaad wax u dejisa iyo daawada niyadjabka loo qaato. La tasho dhakhtarkaaga inta aadan qaadanin daawoyinkan.

Furaha maamulidda daaweynta HCV waxa ay la xiriirta in dhacdada dhibaatooyinka barbasocda sida ugu dhaqsiya badan wax looga qabto. Markasta u soo sheeg daryeelaha caafimadkaaga dhibaatooyinka ka yimaada qaadashad daawada sida ugu dhaqsiya badan inta aanay noqon kuwo ba'an.

Cuntada

Bacdama beerka uu sifeeyo iyo kiimikada ka saara waxkasta ee aad cuntid iyo aad cabtid, waxa muhiim ah in la cuno cunto isku dheellitiran oo caafimaad leh. Cuntada raacda xeerarka guud oo ka kooban nafaqo caafimaad leh oo ku salaysan habka cusub ee Food Guide Pyramid ayaa badanaaba dadka lagula taliyaa in ay raacaan. Cuntada noocan waxaa ku yar dufanka iyo cusbada, waxaana ka buuxa nafaqo sonkor iyo quwad leh iyo nafaqo leh. Marka cuntada qaarkeeda layska dhaafo waxa marka yaraanaysa howsha uu ka qabanayo sifeynta iyo shiidinta, taaso guud ahaan beerka ka dhigaysa mid caafimaad qaba. Cuntada warshadaha laga soo diyaariyo waxaa ka buuxa kiimiko, marka iska yaree cuntada la qasacaadeyey, la qaboojiyey, iyo kuwa kale ee kimiko si cimrigooda loo dheereyo. Marka la cuno miraha iyo qudaarta sideeda beerta looga soo jaray waxa aad marka iska dhowraysaa kuwa xasharaadka sunta looga dilo iyo kuwa kiimikada lagu daro marka ay u soo korayaan oo ka duwan kuwa sida caadiga ah u baxa. *Aqriso calaamadaha oo si aad u baratid waxyaabaha ay cuntada ka koobantahay.*

Barotiinka waxa laga hela digaagga, malayga iyo qudaarta oo ah tan ugu nafaqo badan. Waxa lagula taliyaa dadka qaba cudurka beerka oo nooc kasta ah in ayna cunin lohodka cayrin ah ama aan si fiican loo karinin (xita haddii ay difaac ka haystaan cagaarshowga beerka). Dadka qaba HCV in ay iska dhowraan cuntada cusbada, dufanka ama sonkorta badan. Maaddada laga helo shaaha iyo qaxwaha (caffeine) waxaa ku jira kiimiko u baahan in beerka uu sifeeyo, iyo waxaa lagu taliyaa in la yareeyo isticmaalak qaxwaha, shaaha iyo soodhada. Bacdama shukulaatada ay leedahay dufan badan (iyo maadooyinka kamid ah kuwa laga helo qaxwaha), waxa fiican in cuniddeeda in si qiyaasan loo cuno. Dadka qaarkiis oo qaba HCV ma xamili karaan caanaha iyo waxa caanaha laga sameeyo. Haddii xaaladda ay sidaa tahay waxaa fiican in canaaha lagu baddalo wax kale sida caanaha digirta iyo beriiska laga sameeyo. Cuntada isku dheellitiran oo waxkasta leh waa in ay lahaato macdanta uu jirka u baahanyahay, waxaa kaloo jirta in daka qaarkiisa ay qaataan fiitamiinno ka kooban dhammaan fiitamiinnada aan laga maarmin. Fiitamiinnada quwadda badan sida kuwa leh in badan ee A iyo D; fiitamiinka A waxa uu sun u gudbin karaa beerka. Haddii aad u baahatid fiitamiinnada awoodda badan iyo/ama nafaqada laga helo qudaarta, waxa aad doorata mid awoodeedua ay hosayso ayna lahayn birta macdanta ee cuntada qaarkeeda ku jirta.

Dadka qaba HCV wa inay la tashadaan cunta yaqaanno fasax u haysta habka cunta qaadashada gaarka ah Ha isku dayin in aad cuno cunto aan caadi ahayn adiga oo aan la

tashan dhakhtar waxaa ku takhasusay. Waxaa intaaa sii dheer, iska hubso in aad dhakhtarkaaga u sheegtid waxa ku saabsan fitamiin kasta oo aad qaadatid.

Khamriga iyo Daroogada

Baaris cilmiyad badan waxa ay caddayeen in isticmaalka badan ee khamriga uu soo dedejinayo faafidda cudurka HCV. Lama oga haddii in isticmaalka goos-gooska iyo midka fudud ee khamriga in uu dhibaateeyo beerka, laakiin khubarada badankooda waxa ay ku taliyaan in dadka qaba HCV in ay gebi ahaamba khamriga iska dhaafaan. Daawoyinka inta badan (kuwo lagu soo qoro, iyo kuwa aan la qorid u baahnayn, ama raaxada) waa in uu beerka sifeeyo. Dadka qaba HCV waa in ay iska ilaaliyaan dawoyinka raaxada iyo tubaakada (sigaarka). Dhakhtarkaaga heybso inta aadan qaadan daawoyinka la qoro iyo kuwa aan la qorin. Dhirta wax lagu dabiibo qaarkood waxaa la soo caddeyay in ay waxyeelleeyaan beerka.

Caafimaadka Sare ee Guud

Maamulidda cadaadiska ama kadeedka

Dejinta cadaadiska waxa ay kamid ah siyaabaha ugu weyn wax looga qabto cudurka HCV. Marka aad qabtid cudur dabadheeraada waa marxalad cadaadiska badan leh. Dad badan ayaa soo sheega “cadaadis” (muddoyinka u badan in uu cudursheega uu sii kordhayo) kaddib marka cadaadisku laga soo gudbo. Jimicsi, isnasiino, iyo wakhtiga oo si deggan loo agaasimiyo waxa ay kulligood waxa ka gaysanayaan yaraynta cadaadiska. Iskuday in aad u dhaqantid adiga oo ogsoon xaaladda dhabta ee caafimaadkaaga iyo in ay niyadsami jirto. Garashada xaaladdaada adag ee cudurka beerkaaga waxaya muhiim u tahay sawirka dhabta ee xaaladdaada.

Maamulidda daalka

Daalka iyo heerarka tabaryarida waxa ay caadi u noqdeen dadka qaba HCV. Xafido inta ay awooddada tahay oo iska ilaali waxa aadan awoodin. Marka aad waxqabasho qorshaysato samayso wakhtiyo aad nasato ama aad seexatid. Xusuuso in caafimaadkaaga u yahay muhiim—baro in aad “maya” ku tiraahdid saaxibbada iyo qaraabada kaa filanaya in aad qaban kartid wax awooddaada dhaafsan.

Maamulidda wakhtiga

Qorshayso arrimahaaga iyo isku day wax ah si hubaal u shaqeeya iyo jadwal raaxa qaadasho leh.

Isticmaal jadwal maalinle ah oo kugu caawiya abaabulidda iyo isku dubbaridda hawlaha. Si joogta ah u kaasho jadwalkaaga maalinlaha ah marka aad ballamo samaysanayso iyo jadwalka qorsheeya hawlahaaga . Ha halmaamin in aad ku dartid wakhtiga nasashada.

Isnasiinta

Isnasintu waxay wax ka tari kartaa maamulidda iyo la nolaanshaha HCV ama cudur kasta ee dabeedhaarada. Waa wax fudud oo si sahlan loo baranayo. Isnasiinta waxa ay hoos u dhigi kartaa cadaadiska waxa ay ku caawinaysa muuqaal caafimaadee ee noloshu.

TALLAALKA

Wax si weyn loogu waaniyaa in ay sameeyaan dadka qaba HCV ayaa ah in ay iska tallaalan cagaarshowga A iyo B haddii aysan haysan wax ka difaaca. Cudurka ba'aan ee HAV iyo HBV aya laga soo sheegay dad qaba cudurka HCV. Tallaalka cagaarshowga A waxa uu ka koobanyahay laba goojo oo muddo lix bilood ah. Labada tallaalba waxaa laga sameeyay fayrus dhintay iyo in ay yihiin kuwa laysku halleyn karo oo waxtar leh. Iskudarka HAV/HBV aya waxaa oggolaatay FDA Maajo 2001.

Internetka

Internetka waaxa ka buuxa akhbaar tira badan, mid fiican iyo mid xumba. Marka iska eeg halka uu akhbaartu ka imaanayo. Eeg taariikhaha iyo meelaha laga soo xigsado. Akhbaar kasta ee aad ka shakisid dabagal ku samee. Iska hubso wax aad ku aragtid Bogga internetka oo dhahaysa ‘daawo lagu biskoodo’ ama akhbaar kale ee aan dhab ahayn. Xusuuso in akhbaarta idil ee aad Internetka ka hesho in aysan sax ahayn. Kala tasho dhakhtarkaaga akhbaar kasta oo ku shaki galisa. Waxa laga fiirsado waxaa laga helayaa waxtar muddo dheer mira dhalinaya!

Jimicsiga

Jimicsi fudud aya lagula taliyaa dhammaan dadka aan weli gaarin heer halis leh ama u ku jira kan kama dambeysta ah ee HVC. Jimicsiga waxa uu kaa caawin karaa dhimista cadaadiska waana shay aad ugu fiican hanashada caafimaad fiican. Laakiin, jimicsi badan waxa sababi karaa “flare-ups”. Isku day in aad dooratid jimicsi fudud sida socodka iyo dabbaasha. Kaddibna xooga xooga ku dar ilaa aad ka gaartid heerki aad rabtay. Markasta la tasho dhakhtarkaaga inta aadan bilaabin barnaamijka jimicsiga.

Kooxa wax Caawiya

Dad badan oo qaba HCV waxa ay dareemaan cidlo oo dhiibatoyin kaga timaadda xaaladda nololaha leh cudur dabedheeraada. Kooxaxa wax caawiya waxaa laga helayaa meel looga hadlo arrimaha qiiraada leh ee ku saabsan HCV. Waxaa inta sii dheer taloyinka aad la wadaagaysid xubnaha waxa ay kaa caawin karaan arrimaha ku saabsan go’anno meelo kala duwan uu jeeda ee haysta dadka qaba HCV. Waxaa si weyn lagu talinayaa in aad kamid noqotid koxahan inta ay daaweyntu HCV kuu socoto.

Cagaarshowga C ee dabedheeraada waa cudurka gala beerka wuxuna la imaan kara dhiibaato halis xun dhalisa. Waxaa fiican in la xasuusto in dad badani aysamba dareemaynin calaamadaha ama faafidda cudurka. Kuwa goor dambe haleesho faafidda cudurka waxa laga yaabaa in aanayba lahayn calaamadaha tobanaan sano. Haddana, dadka qaarkood waxaa durbadiida ku xumaada cudurka beerka kaa soo sabibi kara beerka oo hallaaba ama geeri. Daaweyn cusub ee HCV ayaa hadda la tijaabiyaa, waxaana la rumaysan yahay in fursadaha daaweynta la filayaa in shan sanadood gudahooda daawyn loo helo. Waxaa intaa dheer, isbaddalada sida loo noolanayo sida cunto fiican, jimicsi, agaasinka cadaadiska waxa ay kaa caawin karaan in hakiyaan dibaatooyinka daaweynta ay keeni karto iyo in gaabiso faafidda cudurka.

Ilaha

Faahfaahin dheeraad ee la xiriirta HCV, la soo xiriir ururrada soo socda

• *American Liver Foundation*

1-800-465-4837, www.liverfoundation.org

• *Gaargaarka Xiiriika C (Hep C Connection)*

1-800-522-4372, www.hepc-connection.org

• *L.O.L.A. (Ururka Laatiinka ee Feejignaanta Cudurka Beerka)*

1-888-367-5652, www.lola-national.org

• *Hepatitis Foundation International*

1-800-891-0707, www.hepfi.org

Ilaha Farmashiyada

• *Roche Patient Assistance Program—Pegassist*

1-877-PEGASYS (734-2797)

• *Schering-Plough Commitment to Care*

1-800-521-7157

Ilaha cudurrada lammaanta ah ee HIV iyo HIV/HCV

• *Akhbaarta Qorshaha (Project Inform)*

www.projectinform.org

hotline: 1-800-822-7422

• *HIV iyo Hepatitis.com*

www.hivandhepatitis.com

• *Qorshaha Qaranka ee Daaweynta iyo U Doodidda AIDS (National AIDS Treatment Advocacy Project)*

www.natap.org

Oogolaanshaha lagu badalayo, lagu daabacayo, iyo lagu qaybinayo dukumiintigan sababo la xiriira waxbarashada waxaa laga helay iyo lagu dhiirrigaliyay guddoonsi ka yimid Cagaarshowga C Qorshaha Taageerada.

**Hepatitis C:
A Basic Guide to Understanding Prevention, Diagnosis,
and Disease Management**

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**Hepatitis C Support Project
www.hcvadvocate.org**

Introduction

HCV is a blood-borne virus. HCV enters the body through direct blood exposure. The virus attacks cells in the liver, where it multiplies. HCV causes liver inflammation and kills liver cells. Up to 80% of people initially infected with HCV may become chronically infected—that is, the infection does not clear up within six months. Most people with chronic HCV do not have symptoms and lead normal lives. However, in 10–25% of people with chronic HCV, the disease progresses over a period of 10–40 years, and may lead to serious liver damage, cirrhosis (scarring), and liver cancer. Today, HCV is the leading reason for liver transplants in the U.S. There is currently no vaccine or cure for HCV, but various treatments can eradicate the virus and/or help slow or stop disease progression for some people. The National Institutes of Health (NIH) estimates that some four million Americans have been infected with HCV. An estimated 8,000–10,000 Americans die annually of complications related to HCV. This figure is expected to triple in the next 10–20 years. HCV is the leading reason for liver transplants in the U.S.

The Liver

The liver is the largest internal organ, located behind the ribcage on the right side of the abdomen. It weighs approximately three pounds and is about the size of a football. The liver is responsible for some 500 vital functions. It processes virtually everything you eat, breathe, or absorb through the skin.

The liver converts substances you eat and drink into energy and the building blocks for muscles, hormones, clotting factors, and immune factors. It stores many vitamins, minerals, and sugars for later use. Liver cells produce bile, which helps the body digest food and absorb nutrients. The liver detoxifies substances that are harmful to the body. It can regenerate its own tissue—as much as $\frac{3}{4}$ of the liver can regenerate within a few weeks.

Hepatitis simply means inflammation of the liver. It may be caused by viruses, toxic chemicals, drugs, or other factors. The most common forms of viral hepatitis include hepatitis A virus (HAV), hepatitis B virus (HBV), and HCV. These three viruses are related only in that they affect the liver.

HCV Transmission and Prevention

HCV Transmission

HCV is primarily transmitted by direct blood-to-blood contact. Transmission routes include sharing equipment for both injection and non-injection drugs (needles, cookers, tourniquets, straws, pipes, etc.). Needles used for tattooing, body piercing, and acupuncture may also spread HCV. Sharing personal items such as razors, toothbrushes, or nail files is a less likely, but still possible, transmission route.

Before 1992, many people contracted HCV through blood or blood product transfusions. In 1992, a reliable blood test to identify HCV antibodies became available. Since then, the blood supply has been screened. Today the likelihood of contracting HCV through infected blood is less than 0.01%.

Healthcare workers are at risk for HCV infection because of needle stick accidents and unavoidable situations that may result in direct contact with blood from an infected individual.

Military veterans who received vaccinations, injections, or other medical care while in the field may also be at significantly higher risk of having been exposed to the virus.

Transmission from mothers with HCV to their infants before or during birth occurs in 5-6% of births to HCV+ women. Risk of transmission may also depend on if the mother is co-infected with HBV or HIV, which means they are more likely to transmit HCV to their babies. Some studies have shown that HCV is present in breast milk, but breast-feeding is believed to be safe.

The transmission route for up to 10% of individuals infected with HCV cannot be identified. HCV is not transmitted by casual contact such as sneezing, coughing, hugging, or sharing eating utensils and drinking glasses.

HCV and Sex

A small percentage of people may contract HCV through unprotected sexual activity. Among people in so-called “high risk” groups (gay men, prostitutes, people with multiple sex partners, people with STDs), sexual transmission appears to be somewhat more common.

HCV Prevention

Do not share needles or any other drug paraphernalia, razors, toothbrushes, clippers, nail files, or any items that may come in contact with blood. Make sure that instruments used for tattooing, body piercing, and acupuncture are properly sterilized. All cuts and wounds should be covered. Although sexual transmission appears to be rare, you can reduce the risk by practicing safer sex, including the use of condoms and barriers. According to the Centers for Disease Control and Prevention (CDC), if you are in a stable, long-term monogamous relationship you do not need to change your current sexual practices, although partners should discuss safer sex options if either partner is concerned about transmission. If a woman has HCV, avoid sex during monthly periods. Proper dental hygiene can prevent bleeding gums, another possible transmission route.

Notify your doctor, dentist, and other healthcare professionals if you have HCV.

If you are a woman with HCV, talk to your doctor if you are thinking about becoming pregnant.

Symptoms of HCV

Many people report few or no symptoms during the acute phase of HCV infection. Most people with chronic HCV also do not have symptoms and lead relatively normal lives. However, others experience mild flu-like symptoms including nausea, fatigue, fever, headaches, loss of appetite, abdominal pain, and muscle or joint pain. Over time (often years or even decades) people with chronic HCV may develop various symptoms related

to liver damage. Chronic HCV is also associated with a wide variety of related conditions.

Acute Hepatitis C

- Flu-like illness
- Fatigue (mild to severe)
- Fever
- Night sweats
- Loss of appetite (anorexia)
- Nausea
- Vomiting
- Diarrhea
- Jaundice
- Indigestion
- Headaches

Symptoms Reported by People with HCV

- Muscle or joint pain
- Abdominal pain
- Abdominal bloating

Chronic Hepatitis C

- Fatigue (mild to severe)
- Fever
- Loss of appetite (anorexia)
- Nausea
- Indigestion
- Headaches
- Muscle or joint pain
- Abdominal pain
- Depression
- Mood swings
- “Brain fog”

Late-Stage Hepatitis C with Cirrhosis

- Fatigue (mild to severe)
- Fever
- Loss of appetite (anorexia)
- Nausea
- Vomiting
- Fluid retention

Symptoms of HCV

- Frequent urination
- Jaundice
- Indigestion
- Headaches

- Muscle or joint pain
- Abdominal pain
- Abdominal bloating
- Depression
- Mood swings
- Cognitive dysfunction
- Lack of concentration
- Mental confusion
- Dizziness
- Peripheral vision problems

HCV Disease Progression

Cirrhosis is a process in which liver cells are damaged or killed and replaced with scar tissue. Extensive scar tissue formation impairs the flow of blood through the liver, causing more liver cell death and a loss of liver function.

Compensated Cirrhosis means that the liver is heavily scarred but can still perform most functions; people with compensated cirrhosis exhibit few or no symptoms.

Decompensated Cirrhosis means that the liver is extensively scarred and unable to function. People with decompensated cirrhosis often develop complications such as high blood pressure in the vein that leads to the liver (portal hypertension), varices (stretched and weakened blood vessels) in the esophagus (swallowing tube) and stomach, internal bleeding, ascites (fluid accumulation), and other potentially life-threatening conditions. They may also experience reversible mental confusion.

Liver cancer usually develops at later stages of HCV infection, typically after 25–30 years. The type of liver cancer associated with HCV is called primary hepatocellular carcinoma (HCC).

Conditions Linked to HCV

A number of different conditions have been associated with HCV. Some of these are autoimmune conditions, in which the immune system attacks the body's own tissues. Conditions sometimes seen in people with chronic HCV include Sjögren's syndrome (characterized by dry eyes and dry mouth), kidney conditions such as glomerulonephritis, and skin conditions such as lichen planus (characterized by white lesions or bumps) and porphyria cutanea tarda (characterized by a sun-sensitive rash).

Other related conditions include certain types of arthritis (joint inflammation), arthralgia (joint pain), thyroid disease, vasculitis (blood vessel damage), and cryoglobulinemia (high levels of a blood protein that settles in the kidneys, skin, and nerve endings). Most serious conditions are associated with late-stage HCV disease, when the liver is damaged and not able to function properly. Many people with HCV never experience any of these conditions. Check with your doctor if you experience any unusual symptoms.

Diagnosing HCV

HCV Antibody Tests HCV ELISA: is a simple blood test that can detect HCV antibodies.

RIBA HCV: is a second antibody test that may be performed after an ELISA test to confirm the presence of HCV antibodies. This test is usually only performed in people who test positive by the HCV Elisa but do not have known risk factors for acquiring HCV.

Viral Load Tests: Viral load tests measure the amount of HCV circulating in the blood. Viral load tests are used to confirm active HCV infection, to predict medical treatment response, and to measure how well the medications are working against the virus during treatment.

It is recommended that you keep copies of your lab and biopsy results for future reference. The tests below can help determine whether you are infected with HCV and the state of disease progression.

Genotype Tests

Genotype tests are used to determine what type(s) of HCV you have. This information is useful for making treatment decisions, such as how much medication to use, how long treatment should last, and the likelihood of responding to treatment.

Liver Biochemical/Function Tests

There are various blood tests used to assess how well your liver is working. The most common measurements are alanine aminotransferase (ALT) and aspartate aminotransferase (AST). ALT and AST are enzymes that are released into the blood when the liver is damaged. They are often higher in people with HCV infection. Many people with HCV have mild to moderate elevations of these two enzymes, which are often the first indication that they are infected.

Abnormal levels may indicate disease progression, as well as other abnormalities. Many factors such as use of medications and alcohol may cause abnormal lab results. Before drawing your own conclusions, check with a healthcare provider.

Liver Biopsies

Biopsies are done to measure the severity of inflammation, the amount of scarring, and the general health of the liver. They may also be used to help determine if treatment is needed. The most common procedure is to numb the skin and muscle and then quickly insert a long, thin needle into the liver to draw out a specimen. Many people fear this procedure, but complications are rare. If you are anxious, ask your physician for a mild tranquilizer prior to your biopsy and for pain medication afterwards.

HCV Treatment Options

Today, the standard of care for treating HCV is the combination of pegylated interferon plus ribavirin. Research is ongoing to develop new and better medications in hopes of increasing the treatment success rate of patients with HCV.

There are also several alternative and complementary treatments that people have used to treat HCV infection, for example, milk thistle (silymarin) and licorice root (glycyrrhizin). Herbal and other alternative therapies should be discussed with your doctor.

Pharmaceutical Treatments

Pegylated interferon, and Ribavirin. Pegylated interferon (PEG) is a long-acting form of interferon that can be injected once a week. PEG maintains a more constant level of interferon in the blood and better reduces the ability of HCV to replicate. Ribavirin is an oral antiviral medication used in combination with interferon to treat HCV infection. Ribavirin alone is not effective against HCV.

The combination of pegylated interferon plus ribavirin is now considered the standard of care for treating HCV. There week as an injection right under the skin. The ribavirin dose is given at a dose dependant on a person's weight.

Measuring Treatment Response

People receiving HCV treatment should be tested on a regular basis to monitor side effects and to make sure that they are responding to therapy. If someone has not responded after three months of treatment, further therapy is unlikely to clear the virus. Many physicians recommend stopping the medications at this time. However, some evidence suggests that interferon can decrease scarring and inflammation and improve liver health even if it does not clear the virus.

Virological response is a measure of how a person's viral load level responds to treatment. When a person's viral load becomes undetectable after HCV therapy has been initiated, this is considered a virological response. If the virus remains undetectable beyond six months, the term sustained virological response (SVR) is used.

Investigational Pharmaceutical Therapies

HCV therapy has seen impressive advances, given that the virus was only identified in 1989. However, current treatment options can have many undesired side effects and treatment success may not always be achieved.

Treatment Duration and Medications

The standard duration for treatment of chronic hepatitis C is 48 weeks for genotype 1, and 24 weeks for genotypes 2 and 3.

Ribavirin Warning

Ribavirin has been shown to cause birth defects and miscarriages.

Women of childbearing age, their male partners, and female partners of male patients taking Ribavirin must use at least two effective forms of contraception during treatment and during the six-month post-treatment follow-up period.

HCV Vaccines

There is currently no vaccine for HCV, as there are for HAV and HBV. HCV vaccines will be difficult to develop due to the virus' different genotypes and its ability to change,

or mutate, during infection. Some progress is being made, but an effective HCV vaccine is not expected for 5–10 years.

Predicting Response to Treatment

Adherence to HCV therapy is an important factor in achieving the highest possible treatment response rates. Treatment with interferon plus ribavirin is more likely to clear HCV if a person has a genotype other than 1, a low HCV viral load, infection with HCV for a shorter time, mild to moderate disease, is female, has a healthy body weight and is of a younger age. An early drop in viral load predicts a successful response at the end of treatment. These guidelines may be used to help tailor treatment or to stop treatment that is not working. However, some doctors believe that therapy should be continued, because some people still respond to therapy or experience improved liver health even if their viral load does not become undetectable or decrease by the suggested amount.

Exercise is one of the most important components of health maintenance, and this remains true during therapy. Physical activity helps you stay positive and focused and improves well-being. Moderation is the key to physical activity. Some good choices for exercise include stretching, walking, yoga, or any activity that you enjoy.

For some people, physical side effects are worse when the drug is started and may diminish over time. The most common reason for stopping HCV therapy is anemia (low red blood cell count), low platelet count, and low white blood cell count. There are medications used to control these conditions which your doctor can prescribe.

Some people may develop thyroid dysfunction while on treatment with interferon. Thyroid function should be closely monitored prior to starting treatment and then every three months during therapy. In most people, thyroid function returns to normal once therapy is discontinued, but some people may develop irreversible thyroid problems that will require continuous medication.

Managing Drug Side Effects

The most common side effects of interferon and ribavirin include mild flu-like symptoms, muscle and joint pain, nausea, headaches, fatigue, loss of appetite, dry skin, anxiety, depression, and insomnia. Some physical symptoms may be reduced with ibuprofen or acetaminophen in low doses (2 grams per day or less). High doses of acetaminophen can be toxic to the liver. People experiencing anxiety, irritability, or depression may be helped with mild tranquilizers or antidepressants. Check with your doctor before taking any of these medications.

The key to managing HCV treatment related side effects is to treat them as soon as they occur. Always report any serious side effects to your medical provider as soon as possible before they become severe.

Nutrition

Since the liver processes and detoxifies everything you eat and drink, a healthy, well-balanced diet is essential. A diet that follows the general guidelines for nutritional health based on the new Food Guide Pyramid is generally recommended. Such a diet is low in fat and sodium, high in complex carbohydrates, and has adequate protein. Avoiding

certain foods may reduce the processing and detoxification work the liver must do, and may improve the overall health of your liver. Processed foods often contain chemical additives, so reduce your consumption of canned, frozen, and other preserved foods. Eating organic fruits and vegetables can help you avoid the pesticides and fertilizers used to grow non-organic produce. *Read all labels* to acquaint yourself with ingredients.

Protein derived from poultry, fish, and vegetable sources may be most beneficial. It is recommended that people with any type of liver disease should not eat raw or undercooked shellfish (even if they are immune to hepatitis A). It is often recommended that people with HCV should avoid foods high in fat, salt, or sugar. Caffeine is a chemical that must be processed by the liver, and it is recommended that you limit your caffeine intake by reducing your consumption of coffee, tea, and soda. Because chocolate has a high fat (and in some types, caffeine) content, eat it in moderation. Some people with HCV cannot tolerate dairy products. If this is the case for you, you may wish to use nondairy substitutes such as soy milk or rice milk. A well-balanced diet should contain all the essential vitamins and minerals you need, but some people also take vitamin supplements. Taking megavitamin supplements may be harmful. Avoid taking high doses of vitamins A and D; vitamin A can be very toxic to the liver. If you need extra vitamins and/or minerals, choose a low dose supplement without iron. People with HCV should consult a licensed nutritionist or dietitian for specific dietary recommendations. Do not undertake any unconventional diet without consulting a medical practitioner. In addition, be sure to inform your doctor about any vitamins and minerals you are taking.

Alcohol and Drugs

Many studies have shown that heavy consumption of alcohol can severely accelerate HCV disease progression. It is not yet known if light or moderate alcohol consumption is harmful to the liver, but most experts recommend that people with HCV should avoid alcohol. Many drugs (whether prescription, over-the-counter, or recreational) must be processed by the liver. People with HCV should avoid recreational drugs and tobacco. Check with your doctor before taking over-the-counter or prescription medications. Certain herbal remedies have also been shown to damage the liver.

General Wellness

Stress management

Controlling stress is a major factor in managing HCV disease. Living with a chronic disease is stressful. Many people report “flare-ups” (periods of increased symptoms) following episodes of stress. Exercise, meditation, and time management can all help reduce stress. Try to maintain a realistic picture of your health and a positive attitude. Understanding the severity of your liver disease is an important part of having a realistic picture of your condition.

Managing fatigue

Fatigue and low energy levels are common in people with HCV. Learn your limits and do not overextend yourself. When you plan activities, allow time in between for relaxation or naps. Remember that your health is important—learn to say “no” to friends and family who have unrealistic expectations of your energy level.

Time management

Plan activities well in advance and try to make realistic work and play schedules. Use a daily planner to help with organizing and remembering activities. Consult your planner regularly when making appointments and scheduling daily tasks. Don't forget to include restful activities.

Meditation

Meditation can be a useful tool in managing and living with HCV or any chronic illness. It is simple and easy to learn. Meditation can reduce stress and help you maintain a healthy outlook on life.

VACCINATION

It is strongly recommended that people with HCV get vaccinated against hepatitis A and B if they are not already immune. Severe HAV and HBV infections have been reported in people already infected with HCV. The hepatitis A vaccine consists of two doses within a six-month period, and the hepatitis B vaccine requires three doses within a six-month period. Both vaccines are made from killed viruses and are considered safe and effective. A combination HAV/HBV vaccine was approved by the FDA in May 2001.

The Internet

The Internet contains a wealth of information, both good and bad. Always check the sources of the information you find. Look for dates and references. Challenge any information you believe is in error. Be skeptical of Web sites that contain the word "cure" or other misleading information. Remember that not all the information you find on the Internet is correct. Talk to your doctor regarding any information you are concerned about. Common sense can take you a long way!

Exercise

Moderate exercise is highly recommended for all individuals who are not in an acute or end-stage phase of HCV. Exercise can help reduce stress and is important for maintaining good health. However, too much exercise can lead to flare-ups. Select low impact types of exercise such as walking and swimming. Slowly increase your workouts until the desired level is achieved. Always check with your doctor before starting any exercise program.

Support Groups

Many people with HCV feel isolated and find it difficult to cope with the effects of living with a chronic illness. A support group can offer a safe space to discuss the emotional issues surrounding HCV. Furthermore, the information shared by peer members can be helpful in making decisions about a wide variety of issues facing people with HCV. It is highly recommended that you join a support group while undergoing HCV treatment.

Chronic hepatitis C is a liver disease that can have serious consequences. It is important to remember that many people do not experience symptoms or disease progression.

Those who do eventually experience disease progression may remain symptom-free for decades. However, some people develop serious liver disease that can result in liver failure or death. New treatments for HCV are currently being tested, and it is believed that better treatment options will be available within five years. Additionally, lifestyle changes such as good nutrition, exercise, and stress management can help alleviate side effects and may slow disease progression.

Resources

For more information about HCV, contact the following organizations

- **American Liver Foundation**
1-800-465-4837, www.liverfoundation.org
- **Hep C Connection**
1-800-522-4372, www.hepc-connection.org
- **L.O.L.A. (Latino Organization for Liver Awareness)**
1-888-367-5652, www.lola-national.org
- **Hepatitis Foundation International**
1-800-891-0707, www.hepfi.org

Pharmaceutical resources

- **Roche Patient Assistance Program—Pegassist**
1-877-PEGASYS (734-2797)
- **Schering-Plough Commitment to Care**
1-800-521-7157

HIV and HIV/HCV coinfection resources

- **Project Inform**
www.projectinform.org
hotline: 1-800-822-7422
- **HIV and Hepatitis.com**
www.hivandhepatitis.com
- **National AIDS Treatment Advocacy Project**
www.natap.org

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