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Hepatitis C

Hepatitis C is defined as liver inflammation. Hepatitis can be caused by a virus that may be communicable in various ways. Other types, such as autoimmune hepatitis and hepatitis triggered by drugs and chemicals cannot be spread to other people.

Types of Hepatitis:

1. HAV

Transmission: Usually contracted by eating foods or drinking water contaminated with fecal material. The virus may remain active on a utensil for 3-4 hours. Other routes for infection include kissing and oral/anal sex. Contaminated needles shared between IV drug users are another possible source. One third of Americans show evidence of past contamination to HAV.

Incubation period: 15-50 days

Symptoms: fatigue, jaundice, fever, nausea, abdominal pain, light stools, dark urine

Vaccine: yes

Recommended for individuals traveling in developing countries or those with HBV, HCV, HIV/AIDS.

Course of disease: Once recovery occurs an individual is immune. Severe liver disease or death is rare. For individuals with hepatitis or AIDS mortality rate can be as great as 40%.

2. HBV

Transmission: Spreads by bloodborne, sexual, and perinatal exposure. Sexual contact is the most common mode of transmission in adults. The disease is 100X more infectious than HIV. 30X more likely to contract HBV from a contaminated needle than HCV. Infants born to HBV mothers are at high risk to contract the virus.

Incubation period: 50-180 days

Symptoms: onset of infection is usually insidious and characterized by abdominal pain, fatigue, loss of appetite.

Vaccine: yes

Recommended for all infants, children 11-12 years of age, sexually active teens, healthcare workers, diagnosis of HCV or HIV/AIDS.

Disease course: Between 5-10% of people infected with HBV will develop chronic hepatitis.

The CDC estimates 1.25 million people in the US have chronic HBV infection and 4000-5000 people die annually from HBV related chronic liver disease or liver cancer.

HDV

Transmission: Requires the presence of HBV

3. HEV

Transmission: Spread through contaminated food and water

Incubation: 30-40 days

Vaccine: Not available

Disease Course: Rarely found in the US, primarily found in developing countries. The main difference between HAV and HEV is the high mortality rate in pregnant women.

4. HCV

Transmission:

- Infection is primarily through bloodborne exposure, although perinatal and sexual transmission is possible. Not thought to present in body fluids unless contaminated with blood particles.
- Prior to 1992 blood transfusion was implicated, with screening the risk is 1 case out of 600,000 transfusions.
- Today 60% of cases are from IV drug use. > 80% of IV drug users will contract within 6-12 months of use.
- Unsterilized tattooing, body piercing or manicure equipment.
- Risk to healthcare workers from needle sticks is 3-7%
- Sexual transmission is 5-15%. From unprotected sex or during menses.
- Vertical transmission from mother to baby - < 5%. No documented cases from breast feeding. But mothers should not breastfeed if nipples are cracked or bleeding.

- Shared cocaine straws.
- 10% unable to document source

Incubation period: 20-90 days

Symptoms: Many patients are asymptomatic, or report nausea, vomiting, abdominal discomfort or flu-like symptoms.

Vaccine: Not available. Unstable virus, 6 different genotypes.

Disease Course: Affects more than 4 million people in the US, 150-170 million people worldwide. Between 75-85% of cases become chronic, leading to liver disease, cirrhosis, liver cancer and liver failure. The virus can persist for 20 or more years without noticeable symptoms. Over the last few years has become the leading cause of liver disease and has become the leading cause for liver transplants. 20% of patients develop cirrhosis over a 20-30 year period and of this number 5% will die of liver disease.

Functions of the liver - Western

1. **The liver is the second largest organ in the body, only the skin is larger.**
2. **Blood circulation and filtration**
3. **Bile production and fat metabolism**
4. **Blood sugar regulation**
5. **Cholesterol production**
6. **Toxin removal**
7. **Liver enzyme synthesis**
8. **Protein Metabolism**

Functions of the liver – Traditional Chinese Medicine (TCM)

1. **The liver affects digestion, fluid metabolism and distribution of energy.**
2. **Controls bile secretion (Gall bladder is the paired organ)**
3. **Stores and regulates Xue (blood and other substances).**
4. **Removes toxins from the blood.**
5. **Controls the smooth flow of Qi (energy) and blood throughout the body.**
6. **Regulates the whole body by making Qi flow smoothly through the channels and organs.**
7. **Balances the emotions.**
8. **The liver controls the tendons.**
9. **The liver opens into the eyes.**
10. **The liver manifests itself in the nails.**

The spleen – the liver’s partner.

1. **The spleen governs transformation and transportation – the process of digestion.**
2. **The spleen maintains proper movement of ingested fluids and fluids throughout the body.**
3. **The spleen creates and controls Xue (blood)**
4. **The spleen dominates the muscles and limbs.**
5. **Spleen controls the lifting of qi.**
6. **The spleen houses thought.**
7. **Spleen disharmony can be caused by over worry, overthinking and overwork.**

Who should be tested for HCV

- Anyone who received a blood transfusion, hemodialysis or organ or tissue transplant prior to 1992.
- Anyone (such as hemophiliacs) who received blood clotting factors prior to 1987.
- Anyone who has had intimate contact with or lived with someone infected with HCV.
- Anyone who has ever injected street drugs, even if it happened only once.
- Anyone with a history of body piercing or tattooing.
- Anyone with a history of multiple sex partners or sexually transmitted diseases.
- Healthcare, emergency medical and public safety workers who experienced needle sticks, cuts or mucosal exposure.
- Anyone who suspects they have general symptoms of hepatitis such as feelings of nausea, depression or lethargy especially if accompanied by dark urine or light stools.
- Newborns or infants of HCV infected mothers.
- Anyone with persistently high AST and ALT liver enzymes.

Tests

Liver function tests- AST(SGOT)/ALT (SGPT); elevation is an indication of liver inflammation

ELISA II ó can detect antibody to HCV

Viral Load ó HCV RNA by PCR and HCV RNA by branched DNA assay

Genotype

Liver Biopsy

Is There A Cure?

Some western treatments reduce the viral load to undetectable levels. This is sometimes interpreted as a cure. In China there is a history of effective treatment for liver disease, but the approach is different than Western Medicine. Herbs protect the liver from damage and hold the virus in check.

Western Treatment

1. Interferon (by injection) ó 3 million units, 3 times per week for one year.
2. Interferon and Ribavirin ó 1 year for genotype 1a and 1b, 6 months for genotype 2,3,4. 1a and 1b are the most common forms in the US and the cure rate is about 27%. The response rate for 2,3, 4 is about 70-80%.
3. Pegylated interferon ó currently in clinical trials seems to have a 10% better response rate for 1a and 1b.

Individuals are more likely to clear HCV if the viral load is <2 million copies, female sex, shorter duration of infection, younger age and mild to moderate disease. After 12 weeks of antiviral treatment, a 2-log drop in virus or elimination of virus is predictive of a successful end of treatment response.

Treatment by Chinese Medicine

The Chinese Medicine practitioner completes a comprehensive evaluation and arrives at a Chinese Medicine diagnosis for you and will plan an individualized treatment plan for you that includes acupuncture, herbal formulas, dietary guidelines and other lifestyle changes. Common Chinese Medicine diagnosis include: liver qi stagnation, spleen qi deficiency, liver yin deficiency, liver/GB damp heat.

Chinese Medicine can be helpful in treating the side effects experienced by western medicine treatment. The combination is beneficial for many people.

Dietary Guidelines

Eating Well: General Considerations According to Chinese Medicine

1. Enjoy the food you eat.
2. Have a positive attitude about food. We often have beliefs about a good vs. bad food.
3. Relaxation. Don't mix food with work, reading or watching TV. Avoid emotionally charged subjects. Crossing our legs, sitting in a hunched over or twisted position compresses our digestive organs and hinders the passage of food.
4. Chew your food well. The Chinese have a saying that "The stomach has no teeth".
5. Stop eating before you are full. Overeating creates stagnation and may result in you feeling tired because your energy is occupied with the digestion of excess food. Habitual overeating overstrains the spleen and may produce mucus or heat.
6. Don't flood the spleen. Consume most of your fluid between meals. Much more than a cup dilutes the action of the spleen and stomach and weakens digestion.
7. Don't chill the spleen. Too much raw or chilled food or fluid can weaken the spleen. The process of digestion needs warmth (digestive fire).
8. Eat at regular times. As we get older our spleen function is less strong.
9. Eat the main meal early. In the evening (yin time) our body is slowing down, the food will sit in our digestive tract longer and create stagnation and heat that can damage our stomach yin.
10. Choose food with a strong life force. Fresh, locally grown food in season is the best. Excessive processing and chemicals tend to effect food value.

11. Eating well	Vegetables and Fruits	40-60%
	Grains	30-40%
	Beans, Dairy, Meat, Nuts	10-20%

Additional guidelines are given according to your Chinese Medicine diagnosis.

Basic Dietary Guidelines According to Western Medicine

1. Avoid iron
2. Eliminate drugs and alcohol
3. Reduce dietary fat ó 20-30% of our calories a day from fat, only 10% should be saturated fat.
4. Balance protein sources ó vegetable proteins are easier on the liver
5. Reduce sodium intake
6. Monitor fluid intake ó sufficient fluids are necessary for body to process nutrition and eliminate toxin. A 150 lb person should drink nine 8 oz. Glasses per day.

Prescription and over the counter medications that can affect liver function

Acetaminophen (Tylenol)	alpha-methyldopa (Aldomet)	amiodarone (Cordarone)
Chlorzoxazone (Parfon Forte)	Fluconazole or ketoconazole (Diflucan, Nizoral)	
Hydralazine (Apresoline)	ibuprofen (Motrin)	isoniazid (INH)
Nitrofurantion (Macrochantin)	phenytoin	quinidine (Cardoquin)
Rifampin	Sulfa medications (Septra or Bactrim)	
Vitamin A (in doses >5000 units/day)		

Herbal patent medicines, tonics, elixirs and prepackaged solutions can be risky for anyone, whether they have liver disease or not. Ingredients labels may be incomplete. Avoid self-prescribed premixed preparations, rely on a trained and experienced herbalist who can individualize your herbal therapy and monitor your reactions.

Important: You should discontinue taking any drug or herb if you experience a skin rash, substantial nausea, bloating, fatigue and/or aching in the area of the liver, yellowing of the skin or pale feces.

Resources:

The Hepatitis C Help Book by Misha Ruth Cohen, OMD, LAc and Robert G. Gish, MD
 Hepatitis Magazine ó 1-800-310-7047 or www.hepatitismag.com
 HCV Advocate ó www.hcvadvocate.org