

Cirrhosis of the Liver

Introduction

It was only 3 years ago that my 39-year-old uncle died from complications related to cirrhosis. I always remember him as a young and vital carpenter, who made something for himself through his beautiful trim work, and hold the memory of the wonderful and perfect family that he raised. However, at the end of that memory, there is the flashing thought of his image on the hospital bed, yellow from jaundice with swollen legs and a confused look in his eyes. There is also another memory of him with the same cirrhotic symptoms, but still sitting at his favorite bar with a Budweiser in his hand. I always thought to myself, "How could someone who has created so much for himself get lost in alcohol to the extent that he would basically commit suicide like this?"

Cirrhosis is the condition of a diseased liver that can be caused by Hepatitis C, or B, or more rarely through a genetic disorder that affects the bile ducts in the liver. Most commonly in the United States, the cause is alcoholism. Alcohol in excess of 1 drink for a woman and 2 drinks a day for a man can cause scarring of the liver tissue. When consumption becomes a daily habit, there is a certain risk for developing extensive scarring throughout the entire liver that impinges on its ability to carry out all of the major functions for which our bodies need it. This damage is irreversible and incurable and in its late stages will cause death without liver transplant. The problem is, however, that alcoholism ruins the rest of the body to such an extent that an alcoholic is rarely considered a viable candidate for such a procedure.

Section 1: Background and Problem Statement

- Web site #1: National Digestive Diseases Information Clearinghouse (Score: 28)
- Web address: <http://digestive.niddk.nih.gov/ddiseases/pubs/cirrhosis/>

In lieu of a correlative web page linked from Healthy People 2010, I was able to find this site very helpful in the provision of background information. Along with a description of the disease itself, the site progresses through sections pertaining to causation, symptoms, complications, diagnosis, severity, treatment, and liver transplant. The site also provides links to The American Liver Foundation, Hepatitis Foundation International, and the United Network for Organ Sharing. Overall, the organization of the page and the explanations that followed the aforementioned headings were entirely comprehensible to the general public, while providing a thorough understanding of the disease.

- **Web site #2: United States Department of Veterans Affairs (Score: 28)**

- **Web address:**
<http://www.hepatitis.va.gov/vahep?page=cirrh-00-00>

This web site elaborated a bit on the subject of cirrhosis with a focus on Hepatitis C as a contributing risk factor. The information provided compares the risk of cirrhosis development between heavy and light drinkers and those with and without Hepatitis C. The page is well-organized, and the sections are spelled out in layman's terms without excessive medical jargon that can be confusing. At the same time, the information is accurate and descriptive, and the site uses diagrams and colorful figures to aid in the descriptions.

- **Web site #3: Columbia University Medical Center (Cirrhosis) (Score: 21)**
- **Web address:** <http://www.cumc.columbia.edu/dept/gi/cirrhosis.html>

For an expanded medical understanding of the liver disease, cirrhosis, this site proved very useful. Although the design and layout of the page is much less extensive than the previously mentioned Web sites, there is good content here. For example, there is a link that elaborates on an autoimmune disease called Primary Biliary Cirrhosis, which is characterized by inflammatory destruction of bile ducts within the liver, which can lead to full blown cirrhosis. Although there is much more medical jargon found on the page and throughout its links, all the information is thoroughly explained, making the terminology understandable.

- **Web site #4: American Liver Foundation (Cirrhosis) (Score: 28)**
- **Web address:** <http://www.liverfoundation.org/education/info/cirrhosis>

The American Liver Foundation provides another good site for patients and the general community to gather information about the disease, including its causes, symptoms and treatment. The site promotes liver health and living for a healthy liver to a higher extent than the previously mentioned. There are also links through which you can volunteer or donate to help fight liver disease. One of the highlights of the page is a glossary section that helps in understanding all of the terms related to liver disease.

Section 2: Research

- **Web site #1: Trends in mortality after hospital admission for liver cirrhosis in an English population from 1968 to 1999 (Score: 27)**
- **Web address:**
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1774743&tool=pmcentrez#r12>

The first article I reviewed covered a study of mortality rates in British hospitals over a thirty-year span. The finding was generally that the mortality rates hadn't decreased through time, showing that the prognosis for patients with alcoholic cirrhosis remains poor. The study compares patients admitted into hospitals that had cirrhosis of the liver to those who did not have the disease. Mortality was 86 times higher in men and 102 times higher in women than members of the general population.

- **Web site #2: Alcoholic cirrhosis in Denmark – population-based incidence, prevalence, and hospitalization rates between 1988 and 2005: A descriptive cohort study (Score: 24)**
- **Web address:**
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2275281&tool=pmcentrez>

Denmark is stated to have the highest alcohol consumption rates in Northern Europe, which gave precedence to undertake this study. The findings were that alcoholic cirrhosis did put an increasing strain on the Danish healthcare system between 1988 and 2005. However, since 1994, there has been a decrease in cirrhosis related hospitalization for people under 45, which help an overall prediction of a decrease in alcoholic cirrhosis rates in the future.

- **Web site #3: The Role of an Online Community for People With a Rare Disease: Content Analysis of Messages Posted on a Primary Biliary Cirrhosis Mailing list (Score: 26)**
- **Web address:**
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1550634&tool=pmcentrez>

This site interested me because it looked at a sociological aspect of liver disease. The study followed trends in online forums for people dealing with the rare form of cirrhosis called Biliary Cirrhosis, which is genetically caused. The analyses covered 275 people and 710 postings, finding that the majority stuck to medical topics. The infrequency of topics pertaining to role change and other social issues was unexpected by both the group who carried out the study and myself.

- **Web site #4: Diagnosis of cirrhosis by transient elastography (FibroScan): a prospective study (Score: 25)**
- **Web address:**
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1856085&tool=pmcentrez>

This article covered the prospective usability of a new form of technology in the diagnosis of cirrhosis. The Fibroscan is a non-invasive and rapid method of measuring liver fibrosis through liver stiffness. The study showed that liver stiffness is highly correlated with the stage of fibrosis, and that the new technology seems quite promising for the future in cirrhosis diagnoses.

Section 3: Statistics

- **Web site #1: Vital Statistics Indicators - Chronic Liver Disease and Cirrhosis Deaths (Score: 22)**
- **Web address:**
http://www.michigan.gov/documents/LiverDeathsFeb00_10427_7.pdf

This is a well-organized and easy to follow web site that focuses on mortality statistics in Michigan due to liver disease and cirrhosis. Although the focus was on that particular state, the site compared what was going on locally to the national outlook. The most useful statistics showed men to be twice as likely (14.8 deaths/100,000) as women (7.3 deaths/100,000), and 36% higher death rates from liver disease for African Americans as there were for whites.

- **Web site #2: Age-specific number of deaths from all cirrhosis by race, Hispanic origin, and sex, United States, 1970–2005. (Score: 19)**
- **Web address:**
<http://www.niaaa.nih.gov/Resources/DatabaseResources/QuickFacts/Liver/cirmrt2a.htm>

I wanted to get a little more statistical information based on the differences between death rates of various racial groups, and between both sexes, hinted to in the last page. The National Institute on Alcohol Abuse and Alcoholism may have provided this if there was a little more information included. It provided the deaths by each group (Male, Female, Black, White and Hispanic), which were divided into specific age groups. Overall, the 45-54 age group turned in the highest mortalities for every gender and race subsection. This turned out to be the most useful statistic I could take away from the site, as I couldn't figure out how to calculate the numbers in order to compare the different groups. It would have been beneficial to know, for instance, the percentage of the overall

population each group accounted for, so I could compare the likelihood of death from liver disease for each group.

- **Web site #3: National Vital Statistics Reports: Deaths: Final Data for 2005 (Score: 28)**
- **Web address: http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_10.pdf**

This site provided a very thorough report for all reported deaths in the 2005 year. I actually had to scroll down through quite a few pages to get to the information on deaths due to cirrhosis or liver disease. This site confirmed a 2.1 correlations between male and female, and a 1.6 correlation between Hispanic and non-Hispanic white. However, it related a 0.8 correlation between black and white people, which contradicts the information from the Michigan site. However, this may be due to the inner city poverty and lack of education inherent in parts of Michigan (Detroit, for example).

- **Web site #4: Chronic Liver Disease and Cirrhosis Deaths in California, 2000-2003. (Score: 24)**
- **Web address: <http://www.cdph.ca.gov/pubsforms/Pubs/OHIRcirrhosis2000-2003.pdf>**

This web site proved useful in continuing to compare death rates among different racial groups. The most interesting piece of information that I found among these statistics was that Native Americans held the highest mortality rates among the 45-54 age group in California throughout these years. Native Americans had a rate of 61.3, while Hispanics were at a 31.1, blacks were at a 23.8, and whites at a 23.2. I was surprised to see how much lower the death rate was for Asians (4.7).

Section 4: Consumer Information

- **Web site #1: FamilyDoctor.org – Cirrhosis and Portal Hypertension (Score: 27)**
- **Web address: <http://familydoctor.org/online/famdocen/home/articles/188.html>**

This is a good site for anyone who wants to get a general understanding of the disease, including its causes and symptoms. The well-organized subsections would let any person easily scan through the page and gather the appropriate information quickly and easily. However, enough content is provided to obtain a good level of understanding on the topic of liver health. This site also explains a complication of cirrhosis called portal hypertension, which occurs when a low functioning liver causes high blood pressure within a major blood vessel that

tries to supply the liver with blood. A back-up of sorts can occur and send blood back to the heart through much weaker blood vessels. The high pressure can cause vessels to burst, sometimes leading to death.

- **Web site #2: UW Health** (Score: 27)
- **Web address: <http://apps.uwhealth.org/health/adam/hie/1/000255.htm>**

This site is another good reference for the average person with no prior knowledge of the disease. The site is well organized with links for most of the symptoms and causes, as well as a link to a support group and information on when to see your doctor. The site also provides some useful images, including a CT scan of a cirrhotic liver.

- **Web site #3: FAQs.org - Cirrhosis** (Score: 14)
- **Web address: <http://www.faqs.org/health/topics/74/Cirrhosis.html>**

Although this site does contain accurate and pertinent information on the subject matter, the organization of the page is minimal. There are no headings or subheadings, but rather consecutive paragraphs. This makes the page a little less attractive to the general public. Also, there are no references posted to add a feel of legitimacy to the page, and there is no e-mail link for questions or comments.

- **Web site #4: Preventive Strategies in Chronic Liver Disease: Part II. Cirrhosis** (Score: 26)
- **Web address: <http://www.aafp.org/afp/20011115/1735.html>**

This article goes into some detail about the prognosis and survival expectancies that attach to different stages of cirrhosis. This site is actually where I gained the most appreciation for how badly alcohol abuse can affect your health. The article only gives a 2-3 year life expectancy for those with advanced stage cirrhosis. The intent of the site, however, is to provide useful information on how to deal with the liver disease and what precautions should be taken by patients (i.e. making sure all proper vaccinations are administered and regulating diet). The site is overall very informative and useful.

Conclusions

- **Section 1: Background and Statement**
 - **The best Web site: United States Department of Veterans Affairs**

Although I gave the exact same score to this site and the NDDIC site, I found the USDVA site to be a little more user friendly, with the inclusion of more colorful and explanatory images. At the same time, the information provided was in-depth and accurate.

- **The worst Web site Columbia University Medical Center (Cirrhosis)**

It is hard to say that this was the worst site as it truly did provide a lot of good and accurate information. It even included a subsection devoted to the explanation of Primary Biliary Cirrhosis, which I didn't find on the others. However, the site was a bit less organized and navigable than the others, leading to a slightly lower score.

- **Section 2: Research**

The fact that men and women with cirrhosis have much higher mortality rates when admitted into hospitals for other sicknesses was a new concept to me that revealed how vital the liver is in the regulation of our bodies and our overall health. I also learned about the upcoming technology of the Fibroscan, which uses sonar to measure liver stiffness, which can help diagnose cirrhosis by correlating that measurement to the amount of scar tissue in place within the liver.

- **Section 3: Statistics**

The statistics research revealed an interesting difference in mortality rates from cirrhosis between men and women and among racial groups. I learned that men are twice as likely to die from the disease than women and that Native Americans are the race most affected by liver disease deaths. The Sociological implications of these differences are most likely the topic of another paper altogether.

- **Section 4: Consumer Information**
 - **The best Web site: FamilyDoctor.org – Cirrhosis and Portal Hypertension**

This site was the most user friendly and understandable of all the consumer sites I looked through. The information was well organized and spoken of in layman's terms so that any person with no previous knowledge of the disease could be educated without having to break out a medical dictionary. At the same time the information it contained was on par with the more advanced sites I looked through, as far as accuracy.

- **The worst Web site: FAQs.org - Cirrhosis**

This was the worst site of all that I looked through in my studies. This is not due to the fact that the information was inaccurate, as it did, in fact,

correspond to the other pages in that way. However, the organization of the page was off, making the ease of navigation a bit harder. It does seem that subheadings and links are very helpful in conducting research on a medical topic such as this, and the lack thereof within this page led to my lowest score. Also, there was no references listed and the page lacked any other credentials.

The research project gave me a great opportunity to look into the disease that took the life of my young uncle only a few years ago, and provided plenty information that make the glorified industry of alcohol consumption look much less appealing. I take away a new understanding of how detrimental excessive alcohol consumption can be to your health and plan to take the necessary steps towards the avoidance of this terrible disease.

Back to Betty C. Jung's Web site	http://www.bettycjung.net/
Back to Web site Critique Reports	http://www.bettycjung.net/Pch201wsreports.htm
Directory	

Presentation Outline

Background / Problem Statement

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alcoholism ruins the body to such an extent that an alcoholic is rarely considered a viable candidate for such a procedure.

Cirrhosis is a condition in which the liver slowly deteriorates and malfunctions due to chronic injury. Scar tissue replaces healthy liver tissue, partially blocking the flow of blood through the liver. Scarring also impairs the liver's ability to:

- **control infections**
- **remove bacteria and toxins from the blood**
- **process nutrients, hormones, and drugs**
- **make proteins that regulate blood clotting**
- **produce bile to help absorb fats- including cholesterol-and fat-soluble vitamins**

Cirrhosis is a serious public health issue in the United States, based on the fact that there is a definite connection between alcohol abuse and our society's perception of recreation.

Research

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