Alcohol, marijuana & liver transplant?

Where we’ve been and where we are headed: Current practice, research implications and panel discussion.

Liver Transplant and ETOH: Not a 4 Letter Word Anymore

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A brief history of liver transplant and ETOH:
- Assessment
- The 6-month rule
- The emergence of a new approach regarding acute alcoholic hepatitis (6-month rule)
- The important role of the transplant social worker in this process
The “Never-Ending” and Unresolved Controversy of OLT for ALD

1. The fear that patients will return to pathologic drinking after OLT and thereby damage the allograft
2. Conflict with public preferences that may affect the willingness to donate
3. Alcoholic liver disease is related to patient behavior through their own negligence and inebriety (self-inflicted)

Historical View

Because We are Doing a Good Job in Selection

6-month Rule

The History of OLT for ALD

1994 Comprehensive psychosocial assessment (Beresford TP)

Factors associated with maintaining sobriety before and after OLT
Pre-OLT Comprehensive Psychosocial Assessment of Patients with ALD

Negative Prognostic Factors

- Psychiatric comorbid conditions
- Polysubstance abuse
- Unstable character
- Failed rehabilitation attempts
- Social isolation:
  - Lack of employment
  - Absence of a fixed abode
  - Living without a spouse or companion

Beresford TP (1994)

The History of OLT for ALD

1994
Comprehensive psychosocial assessment (Beresford TP)

1997
AST/AASLD Conference on Minimal Listing Criteria

Disease specific criteria: requirement for a 6-month abstinence period before placement on the waiting list (“The 6-month rule”)

Problems With The 6-Month Rule

- Based on custom and practice rather than prospectively gathered data
- Most series were small and with brief follow-up
- Inaccurate methods to assess drinking behavior
- Relapse considered as “any alcohol” rather than severe or problematic drinking
- Many subjects who claim to be abstinent may not be (severe penalty for those who admit drinking)
- Ignores the complexity of addictive behavior

Federico G. Villamil, ILTS, 2013
Problems With The 6-Month Rule

Could have serious or even fatal consequences penalizing unfairly some patients with short-term sobriety who would not relapse after OLT.

The 6-month rule is a good inclusion criteria but a poor exclusion criteria for OLT candidacy (Foster PF et al, 1997).

The “Never-Ending” and Unresolved Controversy of OLT for ALD

The most compelling argument is not the fear that they would have poor outcome.

There is a pejorative view based on public perception and ethical issues.

Conflict with Public Preferences That May Affect the Willingness to Donate
Conflict with Public Preferences That May Affect the Willingness to Donate

- Majority of candidates with end stage ALD in the US who are eligible for liver transplantation are not being referred. Kotlyar, DS, Burke A, et al (2008)
- AASLD (2013) practice guidelines recommend: Early referral for ALD patients for initiation of liver transplant evaluation facilitates psychosocial assessment and setting addiction treatment goals (strong recommendation/high quality of evidence supporting, I-A); and Given the chronic nature of alcohol dependence, ongoing monitoring is an important part of a comprehensive treatment plan (strong recommendation/moderate quality of evidence supporting, I-B).

Priorities for Liver Allocation Among the Public and Clinicians

8 hypothetical cases selected to identify controversial areas in OLT → Selection of recipients for 4 donor livers

<table>
<thead>
<tr>
<th>Patient</th>
<th>Public (n=1000)</th>
<th>Family Doctors (n=200)</th>
<th>GI Doctors (n=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>68 year-old woman</td>
<td>38%</td>
<td>25%</td>
<td>21%</td>
</tr>
<tr>
<td>9 month-old boy</td>
<td>75%</td>
<td>82%</td>
<td>64%</td>
</tr>
<tr>
<td>HCC</td>
<td>74%</td>
<td>97%</td>
<td>45%</td>
</tr>
<tr>
<td>Paracetamol overdose</td>
<td>47%</td>
<td>81%</td>
<td>85%</td>
</tr>
<tr>
<td>Prisoner</td>
<td>2%</td>
<td>17%</td>
<td>9%</td>
</tr>
<tr>
<td>ALD</td>
<td>16%</td>
<td>18%</td>
<td>19%</td>
</tr>
<tr>
<td>Unemployed man</td>
<td>56%</td>
<td>67%</td>
<td>74%</td>
</tr>
<tr>
<td>Former drug misuser</td>
<td>17%</td>
<td>41%</td>
<td>76%</td>
</tr>
</tbody>
</table>


Alcoholic Liver Disease is Related to Patient Behavior Through Their Own Negligence and Inebriety (Self-Inflicted)

Ethical Issues: Self-Inflicted Disease

- Genetic influence in susceptibility to alcohol dependence and alcohol-mediated inflammation and fibrosis (beyond the control of the patient)
- Several other illnesses directly related to patient behavior are readily accepted for OLT:
  - NAFLD (morbid obesity),
  - deliberate paracetamol overdose,
  - acute hepatitis B (active IVDU)
Ethical Issues: Self-Inflicted Disease

- Philosophers and ethicists feel that patients should be treated solely on the basis of medical need and that self-inflicted diseases should have the same access to scarce medical resources.


A New Approach Emerges

- Much of this came about secondary to research and practice in Europe.
- Survival for ALD better at 5 years and equivalent at 10 years when comparing to viral alone, viral + Alc, and unknown cause. Buhr P et al (2010)

Results of OLT for ALD

- Patient and graft survival comparable to other indications
- Similar quality of life and employment level
- No difference between patients with or without alcohol relapse concerning compliance with medications, incidence of rejection or adherence to clinic visits

The French Study

Early liver transplantation for severe alcoholic hepatitis

- If applying 6-month rule, patients with hepatitis not responding to medical therapy have a 6-month survival rate of 30%.
- Since most ETOH deaths occur within 2 months, it challenged the notion of making those patients with severe acute ETOH hepatitis wait for transplant.
- Selection of those patients (26) to be transplanted was very strict.
- Survival rate of those transplanted vs those who had to wait was 77 vs 23 percent. Benefit of early transplantation was maintained through 2 years of follow-up. Three patients resumed drinking after 2 years.
- Study concluded that early liver transplantation can improve survival in patients with a first episode of severe ETOH hepatitis not responding to medical therapy.

Mathurin et al (2011)

The Role of the Transplant Social Worker in Patient Evaluation

The Four “C”s” of Transplant

- Coping resources
- Compliance
- Caregiver support
- Cost to you
- The Four “C”s” are evaluated while utilizing The SIPAT and risk assessment tools.
Comprehensive Risk Assessment

- Utilization of effective assessment tools.
- The Stanford Integrated Psychosocial Assessment for Transplantation, SIPAT (Maldonado et al., 2012).
- The Alcohol Relapse Risk Assessment, ARRA (Rodriguez et al., 2013).
- Methodist Alcohol Rehab Score, MARS (under development, Houston Methodist Hospital, 2014).

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September 2014

Current Policy for Patients with Acute Alcoholic Hepatitis

A confirmed diagnosis of acute alcoholic hepatitis was an absolute contraindication for listing in the past.
Current Policy for Patients with Acute Alcoholic Hepatitis

- Patient must be medically stable to undergo liver transplant.
- Patient must have a proven family/social support system in place.
- Patient must have been functional with respect to employment, family, social and/or community activities with no evidence of impairment as a result of extensive alcohol consumption.
- Patient must have an adequate support plan and plan for care post-transplant which will be assessed and approved by the transplant social worker.
- Patient must not have had an alcohol related conviction within past two years.

Current Policy for Patients with Acute Alcoholic Hepatitis

- There should be no evidence that the patient or family had any prior knowledge of organ damage or other medical issues due to alcohol abuse.
- There should be no underlying unmanageable psychiatric disorders as determined by the psychiatrist.
- The patient or his/her next of kin must sign a contract agreeing to participation in a substance abuse rehabilitation program when medically stable. The rehabilitation program must be acceptable to the transplant team.
- Patient or his/her next of kin must be agreeable to random tox screens.
- There should be no evidence of polysubstance abuse.

SURVEY RESULTS
SIX MONTH RULE: YES OR NO?

Out of the 53 transplant centers that responded:

- 22 require a specific period of abstinence before a patient is evaluated for transplant
- 44 require a specific period of abstinence before a patient is listed for transplant
- 35 centers will consider patients with acute alcoholic hepatitis for liver transplant if he/she has not been abstinent for at least six months

Psychosocial Factors: Risk for Relapse

The factors that were most important in maintaining sobriety:

- Insight into the impact that alcohol has had on one's health
- Strong family/social support
- Completion of a formal rehabilitation program
- Past relapses
- Ability to identify appropriate coping skills
- Failed rehabilitation attempts

Psychosocial Factors: Risk for Relapse

The factors that were least important in maintaining sobriety:

- Having outside interests, such as hobbies
- Involvement in one's religious community
- Having stable employment
Psychosocial Factors Considered When Six Month Rule Does Not Apply

- Strong support system
- Good insight into cause of illness
- No prior knowledge of liver disease
- If patient continued to drink after diagnosis
- Diagnosis of Acute Alcoholic Hepatitis
- Prior history of rehabilitation
- Willingness to do rehabilitation when able to

Case Studies

- T.B: 44 year-old, Caucasian, married, female. Unknown age of first alcohol use as patient was intubated at the time of initial evaluation.


Marijuana and liver transplant
Medical Marijuana

- Medical Marijuana access is increasing throughout the U.S. as more states move to legalizing marijuana

- Medical Marijuana available since 2006 in California

- New, “legal” availability of marijuana

Sample Medical Marijuana Card

Marijuana & liver transplant

- No consistency in length of time that marijuana remains in the body

- Negative perception by health care providers may have a disproportionate impact on marijuana users

- Limited research looking specifically at medical marijuana usage and liver transplantation

- Concerns about impact of dependency on marijuana on adherence post-transplant
Past Research

- Chaiffetz D, Dimartini AF, Venkataramanan R. Prolonged excretion half-life of 11-nor-9-carboxy-tetrahydrocannabinol (THC) following cessation in a chronic, heavy marijuana user: implications for liver transplant assessment. Psychosomatics 2011;52:190-193


USC Liver Transplant Policy

- Transplant Social Worker obtains a copy of the patient’s Medical Marijuana Card
- Patient is told to stop using medical marijuana by transplant team members
- Patient is sent for random toxicology screens (urine) and continues to have random screens until 2 consecutive negative results are obtained
- Education: MDs educate about the risk of aspergillosis post-transplant

...MORE SURVEY RESULTS

Liver transplant programs views of medical marijuana

- 19.5% of programs accept medical marijuana, if patient provides a medical marijuana card
- 22% of programs require patients to quit using marijuana before listing
- 17% of programs accept patients using recreational marijuana (recreational marijuana is legal only in Colorado and Washington state)