The DRAM, Vol. 4(7) – Relapse after an organ transplant

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Long term alcohol abuse and or dependence can lead to organ disease, sometimes creating a need for organ transplant. Returning to substance use after a transplant increases the risk of medical complications and even death (e.g., Kran & DiMartini, 2005). Organs for transplant are scarce (Organ Procurement and Transplantation Network, 2008). Some observers believe recipient prioritization should take alcohol use history into account. This week we examine a meta-analysis to measure relapse among people who require organ transplants and have a history of alcohol misuse (Dew, DiMartini, Steel, De Vito Dabbs, Myaskovsky, et al., 2008).

Data

Meta-analysis of 54 studies, included 3,651 participants and 13,821 person years of observation

Methods

Authors searched six databases (e.g., PsychInfo, MEDLINE) for studies addressing non-adherence to the medical regimen following organ transplantation

Inclusion criteria for studies

- Written in English language
- Published between 1981-2005
- Did not use the same dataset as any other study
- Sample size of 10 people or more
- Indication that prior to transplant, participants had histories of substance abuse, dependence, or diseases that indicated these disorders
- Includes substance use history, relapse, and treatment non-adherence behavior

Outcomes

Relapse to any alcohol use and to heavy alcohol use

Results

Primary outcome	N[a]	Mean	95% CI	Q	Fail-safe N[b]
Alcohol relapse, any use	48	5.6	4.6-6.6	315.1**	7779
Alcohol relapse, heavy use	21	2.5	1.7-3.3	53.6**	568

[a]Number of studies examining each nonadherence outcome; [b]Cannot be estimated for <3 studies
**p<.001; adapted from Dew et al (2008).

Figure. Pooled estimates of post-transplantation rates of relapse to alcohol use (cases per 100 persons per year). Click image to enlarge.

- Average number of observation years per study = 4 (SD=2.7, range=0.9-12.9)
- The Q-statistic in the Figure indicates a wide range of relapse rates across studies
- Risk for post-operative relapse higher for patients of hospitals that had no requirement for 6-month pre-operative sobriety (average effect size: r = .21 (95% CI 0.11-0.31) p<.01)

Limitations

- Retrospective self report methodology
- No control group: unclear whether risk for post-operative drinking is greater among samples with an abuse history than other transplant populations

Discussion

This study reminds us about the likelihood for relapse among transplant patients who had histories of alcohol abuse or dependence. Although popular opinion seems to lean towards sanctions on those with alcohol misuse histories, hospitals can use empirical evidence to guide careful selection of transplant candidates. This study's results suggest one selection criteria could be a longer period of abstinence before the planned surgery. Another guideline, not examined in this study, could be participation in substance abuse treatment before and after the surgery.

—Leslie Bosworth

What do you think? Please use the comment link below to provide feedback on this article.

References

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