Death after psychiatric contraindications to urgent liver transplant following acetaminophen overdose: an 18-year cohort study

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Background

Acetaminophen overdose (AOD) is the commonest cause of acute hepatic failure (AHF) in the UK and USA[1]. When severe, mortality is high, but urgent orthotopic liver transplant (OLT) greatly improves survival[2]. Given the scarcity of organs, potential recipients need careful screening for features that might predict a poor prognosis post-transplant. Psychiatric assessment is a key part of this work-up, but it is time-pressured and often undertaken by psychiatrists without transplant experience. Assessment may identify absolute psychiatric contraindications (APCIs) which preclude transplant in otherwise medically suitable patients. It is unknown how often death occurs in this context. This is the first UK study to examine this question.

Aim

To determine the number of patients presenting with AHF secondary to AOD who died after APCIs to OLT were identified, who were otherwise medically suitable for transplant.

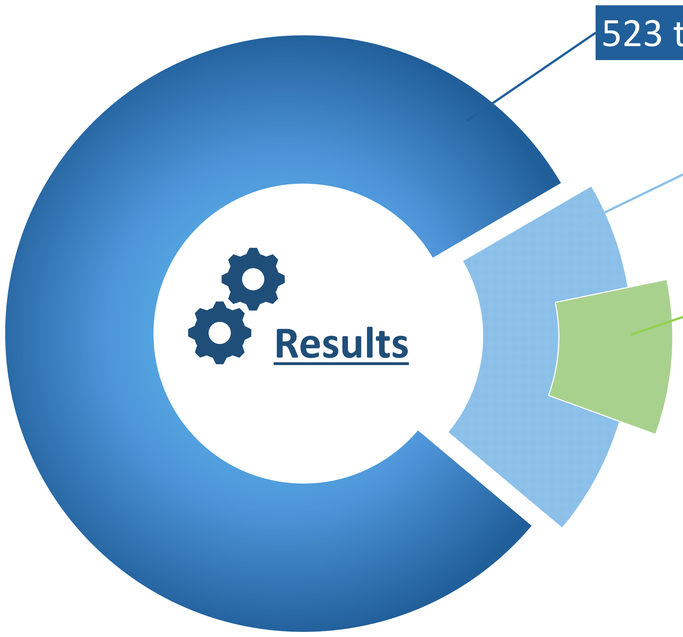
Methods

This single-center retrospective cohort study examined patients with AOD-induced AHF referred to the Scottish Liver Transplant Unit (SLTU) for assessment for OLT between 2006 –2024.

Patients were identified from a departmental database and were included if they had AHF from suspected AOD, received psychiatric assessment for OLT and died before discharge.

Patient records were reviewed for APCIs to transplant, age, sex, and primary psychiatric diagnosis. We calculated the proportion of patients assessed for whom APCIs precluded transplant, resulting in death.

Results



523 total psychiatric assessments for OLT

102 patients died in-episode (19.5%)

46 patients died following identification of APCIs to transplant (45% of total deaths; 8.8% of total assessments)

Examining the demographics of these 46 patients:

- 59% female
  41% male
- Most common primary psychiatric diagnosis: alcohol dependence syndrome, prevalent in 67%
- Average age: 44.6 years (range 19 – 72)

Discussion

Psychiatric assessments for emergency transplant suitability are daunting. They are often subject to multiple pressures and there are no national or international guidelines for psychiatric assessment comparable to the King's College or Clichy criteria. Partly in response to a 1997 legal inquiry, the SLTU codified psychiatric contraindications to urgent liver transplant in unit-specific guidance that remains in place today (see opposite). Other centers may use a similar, if less explicit, approach. The lack of standardized guidance leaves room for variation in practice and potential inequality, as listing decision-making can vary significantly between psychiatrists[3]. The current evidence base for guidance is, however, currently weak and, in part, conflicting [4,5,6]. Given the high mortality without transplant, there is a pressing need for both further research to expand the evidence base, and guidance to aid transplant centers.

SLTU Absolute Psychiatric Contraindications to OLT:

- ≥5 lifetime episodes of deliberate self-harm
- Current substance dependence or active, chaotic, severe substance misuse
- Chronic, severe, poor-prognosis mental disorders
- Repeated non-compliance with medical/psychiatric care
- Capacitous patient refusal of transplant

Conclusion

- This is the first UK study to report the rate at which AOD-induced AHF patients die after OLT is declined because of APCIs.
- Deaths attributable to APCIs made up 45% of all in-episode deaths and occurred in almost 9% of patients assessed.
- Standardized guidelines might assist clinicians and reduce inter-unit variability in listing decision-making.
- There is a clear need for further evidence and intra- and inter-national comparison of practice in this area.

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