

TITLE: INTENSIVE CARE UNIT OUTCOME OF PATIENTS RECEIVING CHRONIC HEMODIALYSIS
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Mortality of patients with acute renal failure in the Intensive Care Unit (ICU) is in excess of 50%. Whether this is in part a reflection of uremia and therefore also true of patients with chronic renal failure (CRF) on maintenance dialysis is unknown.

We reviewed the clinical course and outcome of all patients receiving maintenance hemodialysis (HD) admitted to the multi-disciplinary ICU between 4/87 and 12/88. Results are expressed as mean \pm SD, groups were compared using student t test.

There were a total of 1400 ICU admissions during this time period of which 14 were patients receiving chronic HD. The predicted hospital mortality of the total ICU group using APACHE II was 26% with an observed mortality of 21.6%, mean ICU stay was 5 days.

The patients with CRF were 58 \pm 17 years old and had been receiving HD for 23 \pm 30 months. The

mortality for the HD patients was 29% (4/14). The APACHE II scores for patients with CRF were 31 \pm 9 with an average predicted hospital mortality of >50% (survivors 28 \pm 6 vs 39 \pm 12 for nonsurvivors, $p < .05$). Those CRF patients who died were significantly older (67 \pm 10 vs 54 \pm 18). Patients with CRF were in the ICU 10 \pm 11 days (survivors 10 \pm 2 vs 8.5 \pm 9 for nonsurvivors). All of the nonsurvivors and 80% (8/10) of the survivors required intubation, the survivors were ventilator dependent 6 \pm 10 days.

In conclusion, patients with CRF on maintenance HD have an ICU survival comparable to the general ICU population and better than that reported for patients with acute renal failure. Patients with CRF had longer ICU stays than the general ICU patient population. Survival in CRF patients reflects the severity of their underlying illness, as measured by APACHE II, rather than their uremia.

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TITLE: INDICATION OF VENOUS BYPASS ACCORDING TO A PRELIMINARY TEST OF HEPATIC VASCULAR EXCLUSION DURING LIVER TRANSPLANTATION IN ADULTS.

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The use of venous bypass (BP) during liver transplantation (LT) remains controversial. During 31 consecutive LT in adults, the use of BP has been decided after a 5 min test of hepatic vascular exclusion (HVE). This study was intended to evaluate if the cardiovascular stability throughout the anhepatic phase of LT without BP can be anticipated from the response to a short test of HVE.

METHODS: After volume loading adjustment, a hemodynamic profile was recorded just before and after 5 min of HVE. No vasopressive drugs nor additional fluid was administered during the test. The tolerance to HVE was appreciated on the stability of continuously recorded MAP and SvO_2 . In patients undergoing LT without BP, the hemodynamic changes during the anhepatic phase (at 5, 60 min and at end) were compared with the effects of the short test of HVE. Results are expressed as means \pm SEM and compared by modified t test and ANOVA.

RESULTS: According to the tolerance to the HVE test, the anhepatic phase was performed without BP in 24 patients and with BP in seven. The effects of the HVE test in the two groups are reported in the table.

During the 24 anhepatic phases without BP (107 \pm 3 min), the changes in MAP and in SvO_2 at 5 min are similar to those observed during the test of HVE (fig). During the anhepatic phase MAP and SvO_2 significantly increase: as compared with values at 5 min, the individual changes in MAP range from -8% to +34% and in SvO_2 from -5% to +23%.

DISCUSSION: The good tolerance to the test of HVE, appreciated on MAP and SvO_2 , can predict a steady hemodynamic state throughout anhepatic phase without BP as long as two hours. When restricted to patients with a poor tolerance to HVE, venous bypass is indicated in about 25% of LT in adults.

Table

| | without later BP (n=24) | | with later BP (n=7) | |
|---------------|----------------------------|---------------|------------------------|----------------|
| | Pre HVE | 5min HVE | Pre HVE | 5min HVE |
| MAP (mmHg) | 74 \pm 2 | 69 \pm 2 | 86 \pm 3 | 59 \pm 4* |
| SvO_2 (%) | 86 \pm 2 | 81 \pm 1 | 84 \pm 1 | 66 \pm 1* |
| CI (l/min.m2) | 4.7 \pm 0.2 | 2.5 \pm 0.1 | 5.0 \pm 1.1 | 1.8 \pm 0.3* |
| CVP (mmHg) | 11 \pm 1 | 6 \pm 1 | 9 \pm 1 | 4 \pm 1 |
| SVR (d.s/cm5) | 715 \pm 48 | 1363 \pm 92 | 773 \pm 105 | 1680 \pm 295 |

* $p < 0.05$ vs changes in other group

