Transplantation in 2012: Optimizing Outcomes through Seamless Communication

Liver Breakout Session

Improving People's Lives through innovations in personalized health care

Wexner Medical Center
Liver Transplantation at The Ohio State University:

- A growing program specializing in personalized care with a team approach
- Contemporary outcome date - 1 year survival.
- Metabolic syndrome and Fatty Liver Disease
- Emerging Trends in Acute Liver Failure
- New referrals
POST-TRANSPLANT METABOLIC SYNDROME

Dr. Douglas Levin
Division of GHN
October 13, 2012
POST-TRANSPLANT METABOLIC SYNDROME

- 5% pre-transplant
- 50% post-transplant
- Pre-transplant many are malnourished
  - 30% obese
- How many are malnourished and obese?
- How many are debilitated?
CHALLENGES

- Pre-transplant malnutrition, debility, “sarcopenia”

- Very hard to quantitate because usual measurements altered by advanced liver disease
CHALLENGES

- Weight, BMI, mid-arm circumference, waist to hip measurement, albumin, prealbumin, all modified by disease processes

- High BMI may preclude transplant because of anatomic surgical issues (no room for the new liver) and survival issues (poor outcomes with high BMI)

- But what does this mean?
WHAT WE KNOW NOW

- Pre-transplant eat adequate diet with 1.2 g/kg protein
  - Eat frequently, have bedtime snack

- Shortening fasting interval seems to lessen muscle injury perhaps by minimizing gluconeogenesis

- Low protein diets except in extreme and limited exceptions should be avoided

- In age related sarcopenia exercise seems necessary, but exercise may be dangerous in patients with advanced liver disease and portal hypertension
WHAT WE KNOW NOW

- Post-transplant weight gain and metabolic syndrome common, with features in up to 70%

- Immunosuppressives cause weight gain, diabetes, hypertension, dyslipidemia

- Once patients have gained weight, subsequent weight loss extremely difficult

- Metabolic and cardiac events common in transplant patients after a year or so, lessening 10 year survival
WHAT WE KNOW NOW

- Goal is to prevent weight gain
- Regular exercise when appropriate
- A moderate calorie, moderate fat, low glycemic index diet with exclusion so far as is possible of fructose (including sucrose) seems prudent, never studied in this population.
WHAT WE KNOW NOW

- If excessive weight gain, lap band has been shown to work with relative safety

- Rou-en-y gastric bypass makes biliary access extremely difficult and often impossible and should probably be avoided
WHAT ARE WE DOING

- Attempting to quantify insulin resistance and significant obesity pre-transplant to replace our current, unsatisfactory measurements
WHAT ARE WE DOING

- Attempting to quantify muscle disease pre-transplant and reveal something about its pathogenesis to allow control of this condition which is independently associated with poor post-transplant outcome