

1432-P Elevated Transaminases Suggestive of NAFLD in Overweight and Obese Youth on Second-Generation Antipsychotics

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Background

- Second-generation antipsychotics (SGAs) increase the risk for insulin resistance and metabolic syndrome¹
 - Less is known about the effects of SGA on the development of non-alcoholic fatty liver disease (NAFLD)
- NAFLD is the most common liver disease in youth²
 - ALT elevation in the context of overweight/obesity is most often secondary to NAFLD³
 - Mild ALT elevation in NAFLD can be associated with significant liver disease⁴

Aim

To determine prevalence and predictors of ALT elevation, suggestive of NAFLD, in a large cohort of overweight and obese youth on SGA therapies

Methods

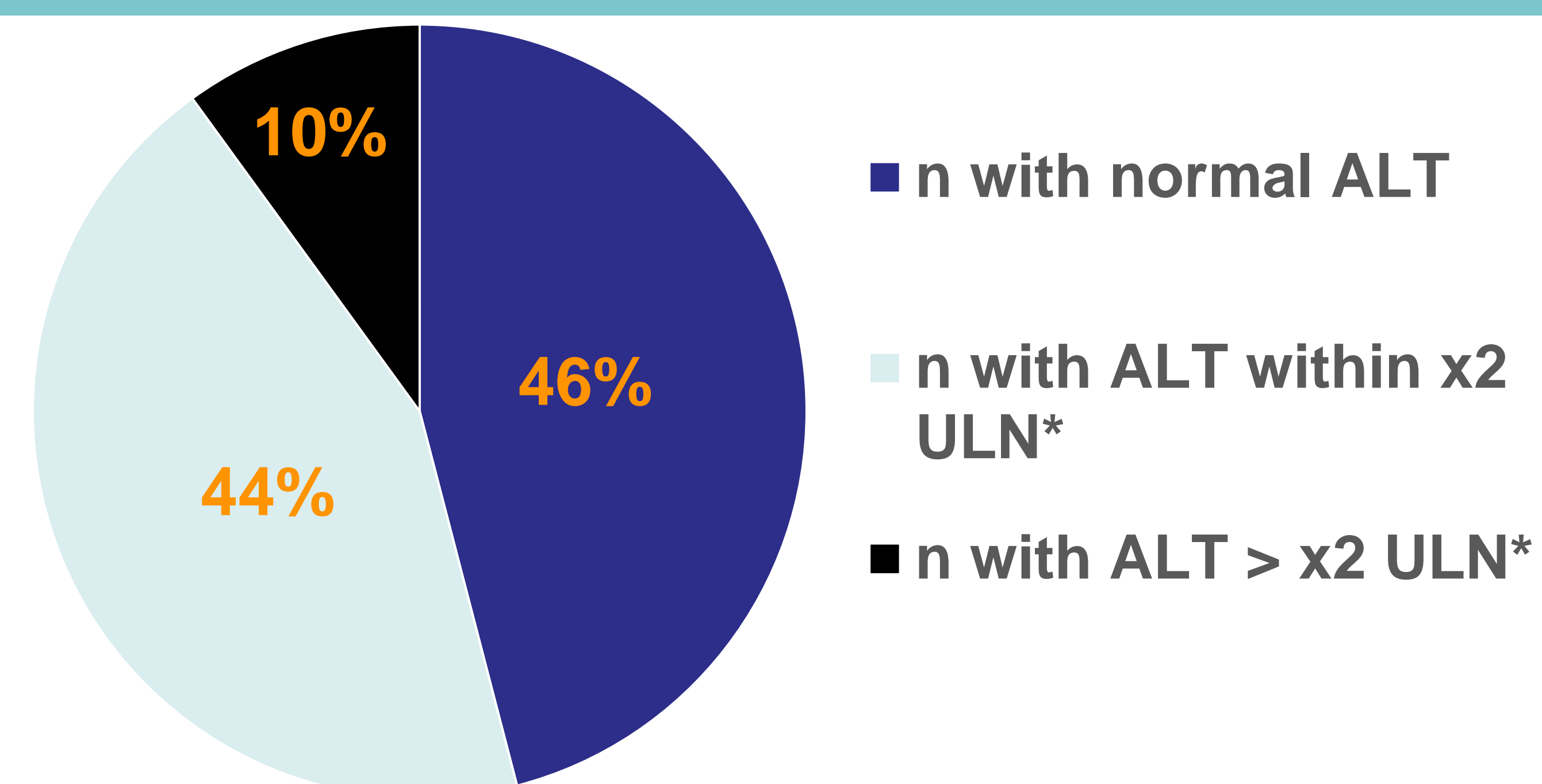
- Review of prospectively collected data
- MOBILITY is a multi-center study designed to assess the effect of metformin + lifestyle instruction vs lifestyle instruction alone, on weight gain and metabolic parameters in children with overweight and obesity (ages 8-19 years) and bipolar-spectrum disorders on SGAs
- Baseline demographics, anthropometrics and labs were collected

Results: Demographics and Weight Status

Table 1: Demographics and clinical characteristics of the study cohort (n=840)

Variable	Result
Male sex, n (%)	445 (53%)
Age, years (mean, SD)	13.8 (2.8)
Race, n (%)	
White	563 (67%)
Black	151 (18%)
Multi-Racial	76 (9%)
Other	50 (6%)
Hispanic Ethnicity, n (%)	92 (11%)
BMI, kg/m ² (mean, SD)	29.2 (5.9)
BMI in obese range, n (%)	286 (34%)
ALT, U/L (mean, SD)	28 (23)

Overall Prevalence and Predictors of ALT Elevation



- Mild ALT elevations were significantly more common among patients with obesity (p=0.007), male (p<0.001) and white (p=0.009).
- No differences with Hispanic ethnicity or age
- Similar associations with obesity and sex, but not race, were observed with significant ALT elevation.

*ULN for ALT defined as 22 U/L for females and 26 U/L for males⁵

Discussion

- In our study, a significant percentage of youth with overweight and obesity treated with SGAs have elevated ALT suggestive of NAFLD
- The prevalence of ALT elevation was greater in overweight and obese patients on SGA therapies than that expected with obesity alone (~30%)¹
- Pediatric psychiatrists who treat these patients should screen for NAFLD with ALT and refer patients for further evaluation and management as needed, keeping in mind that even mild ALT elevations could be associated with significant disease

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