

2019-06-07 17:19:46

Presentation

- Stick with what's in the introduction: 1) change is heritable; 2) Longitudinal studies didn't look at DTI; 3) It's important for ADHD because...
- Don't switch back and forth on the phenotype. Use just one term: structural connections, and we examine it in a finer level through voxels. We looked at two microstructural properties of those structural connections.
- Mention the heritability values of each cluster.
- Start by mentioning I was a postdoc with Philip for 5 years, and last year I started as a bioinformatician in the lab.
- Do NOT focus on AD and RD, just mention it briefly.
- Mention that uncinate connects the limbic system and orbitofrontal cortex. Forceps minor being part of the corpus callosum, connecting the frontal lobes of both hemispheres.
- Don't focus on how just one region correlates. That's just an example of the association.
- Focus on CHANGE. It's the rate of change of a microstructural property that was associated with the rate of change in symptoms, for both inattention and HI.

Questions

- Why voxels and not tracts? We decided to use voxels here because it gives us a finer resolution, compared to looking at tracts defined in a template. There were methodological challenges in the past in using voxels, especially when related to multiple comparison corrections. Now we have those figured out.
- How do the baseline results compared to these change results? Use our family papers as foundation for it...
- What do you make of those opposing direction i the uncinate result?
 1. In our data the rate of change of inattention and HI are not associated- likely reflecting independent, underlying processes
 2. Additionally, twin studies show that change in inattention and change in HI are only partly genetically correlated- that is, they have a largely independent genomic underpinnings. And in this study we are examining correlations with heritable, genetically driven. change in white matter.
- What kind of other support do we need? I know that Dr. Shaw's tenure package is likely to include a dedicated clinician and more specialized genomic support. This will allow me to focus more on the neuroimaging, and more targeted genomic projects.
- What kind of training would I benefit from? I've done some very good training working with Dr. Ben Busby from NHLBI, exploring CNVs in ADHD simplex families. I learned a lot in that 2-month internship, and now we're continuing the project in a collaboration with Broad. Any opportunities like that, where I can further expand my neuroimaging or genomics methods background, are always useful. I've also organized the MEG and Depp Learning interest groups here at NIH.

TODO

- Re-read our previous papers, especially the ones cited as key papers and the heritability one.
- Make correlation between change in inattention and HI. Send scatterplot and values to Philip.

- not significant for ADHD_NOS ($p=.48$) or ADHD ($p=.50$). Not fair comparison including NVs because of all the 0s. We report the ADHD_NOS results.
- Check trend direction for forceps minor cluster.
 - Same direction for inattention (positive T), not close to significance for HI.
- Find out the heritability and SE of peak voxel in the clusters.
 - AD: $h^2r = .61$ ($\pm .27$)
 - RD: $h^2r = .63$ ($\pm .21$)
- Remind myself on how SOLAR computes heritability, and how it is different from familiarity.