MOLECULAR ASPECTS

Update from Banff Paris June 2011

program

- 3 molecular talks during liver/plenary sessions
  - 2 x Banu Sis – Edmonton (Phil Halloran group)
    - mRNA expression array in recurrent HCV
    - Molecular diagnosis of AMR
  - 2 x Alberto Sanchez-Fueyo (Barcelona)
    - Liver bx mRNA expression array : insights into intragraft events associated with dysfunctions / weaning
    - molecular defintion of stable transplant recipient
- Some overlap in data between sessions

Banu Sis

- HCV
  - 25 post tx biopsies
  - Correlation between T cell genes and IFNγ and inflammatory infiltrates
  - NK transcripts ↑in HCV ↓ in AR (only 1 AR case)
  - Fibrosis associated with
    - T cell transcripts
    - Ig (plasma cell) transcripts
    - Mast cell transcripts
  - Fibrosis + Ig increase with time post tx
  - IFNγ + T cell transcripts = abnormal LFTs
  - Cant comment on progression (only 3 cases)
  - ? High NK transcripts without loss of liver transcripts favour HCV

Banu Sis - AMR

- On kidney tx bx (15 cases AMR out of 173)
- Transcripts
  - T cell
  - IFNγ
  - Macrophages
  - Endothelial activation
- All correlate with C4d staining
- Endothelial transcripts higher in AMR than TCMR but absolute differences small
- Endothelial transcripts correlate with Class II DSA

- DSA – Endact – good outcome
- DSA + endact + tx glomerulopathy
- TCMR Endact + poor outcome

take home message from Edmonton groups

- Molecular profiling of biopsies will not replace histological assessment

Alberto Sanchez-Fueyo

- Looked at molecular signals in patients being weaned off immunosuppression
- Gene expression profile of tolerant patients
  - Genes involved in iron metabolism
    - Hepcidin↑, (TFR↓, ferritin↓)
    - Similar to normal population
- Biopsy + molecular profile together useful for reassurance about weaning

summary

- Not out of a job
- Probably not useful in every day practice
- Will be useful in a cohort in conjunction with the biopsy in weaning