Background
Craniopharyngiomas are the commonest suprasellar tumours of childhood. Though benign histologically, their localisation and invasive tendency can cause significant neuroendocrine morbidity even before treatment is imposed, but this has not been studied prospectively.

Objectives
To prospectively determine risk factors for neuro-endocrine morbidity by longitudinal survival analysis.

Methods and Patients
- All (n=30), Table 1 new cases (01.08.2008 to 09.05.2015) of craniopharyngioma presenting to GOSH.
- Assessments of presenting axioly, basal and dynamic pituitary function, tumour volume (calculated using the software "TK-SNAP version 3.3.2".), tumour appearance (evaluated by the neuroradiologist at MGH, degree of hypothalamic invasion by tumour according to Paris grade (PG) at diagnosis and after treatment.
- Subsequent 3-monthly longitudinal review (Tables 2 and 3).
- Kaplan-Meier and Cox regression analysis of patient, tumour and treatment effects on progression free survival (PFS), endocrine event-free survival (EEFS) and total endocrine morbidity score (EMS).

Results
- Table 1. Patient demographics (n=30). Data presented as median (Range) or Proportions.
- Table 2. Number of patients with Paris Grade 0, 1, 2 and 3 at diagnosis and post-operatively.
- Table 3. Proportion of Patients Developing Endocrinopathies at Diagnosis and by Each Treatment Phase.
- Table 4. Evaluation of Influence of Independent Variables on Endocrine Status; shown as: univariate Cox regression for GHDI, ACTHDI, TSHDI. DI: Obesity, Spearman Correlation, Mann-Whitney U test or Kruskal-Wallis for Initial and Final EMS.

Conclusions
- The evolving endocrinopathy, typical of suprasellar tumours is:
  - Hierarchical and present from diagnosis
  - Worse in small intrasellar tumours without mass effect,
  - Aggravated by surgical resection,
  - But unaffected by hypothalamic invasion, tumour volume or imposed radiation.