months history of progressive decreased vision and decreased libido. He denied headache, seizure, erectile dysfunction, or weakness. On physical examination, his visual acuity was significantly reduced on the right eye and was only able to perceive light. He had a visual field narrowing on the left eye. Gynecomastia was noted bilaterally and testicles were found to be enlarged (Orchidometer >25 mL). Complete blood count was significant for hemoglobin of 19.2 g/dL (N, 13.7-17.5 g/dL), and hematocrit of 57.0% (N, 40.1-51.0%). Pituitary function tests were as follow: FSH >200.0 mIU/mL (N, 1.5-12.4 mIU/mL), LH 17.0 mIU/mL (N, 1.7-8.6 mIU/mL), total testosterone 41.3 nmol/L (N, 8.6-29.0 nmol/L), free testosterone 1.263 nmol/L (N, 0.148-0.718 nmol/L), and bioavailable testosterone 29.609 (N, 2.110-8.920 nmol/L). Prolactin, TSH, GH, and ACTH were all within the normal range. Magnetic resonance imaging (MRI) showed a sellar mass involving the planum sphenoidal measuring 5.8 x 5.2 x 5.6 cm with optic chiasm displaced superiorly, in addition, subfalcine herniation with mild hydrocephalus was also noted. The patient underwent orbitozygomatic approach resection of the pituitary tumor. Histological examination was consistent with a pituitary adenoma. Cells stained positive for transcription factor steroidogenic factor 1 (SF 1), FSH, LH, and alpha-subunit consistent with a gonadotroph adenoma. They were negative for transcription factor Pit 1 stain and the remaining pituitary hormones including ACTH, GH, prolactin, and TSH stain. Postsurgical hormone assessment showed a significant decline in FSH and LH to 2.3 and 0.4 mIU/mL, respectively and testosterone level decreased to < 0.087 nmol/L on postoperative day 18. The patient's vision improved postoperatively prior to discharge but he lost follow up thereafter.

Conclusion: Most patients with functioning gonadotroph pituitary adenoma present with large tumors that are detected based on the occurrence of symptoms of compression that result from the enlarging sellar mass. Most patients, particularly men and postmenopausal women, do not develop symptoms of hormone excess and the lack of symptomatology results in delay in diagnosis. Our patients presented with significant polycythemia which resulted from excess testosterone and could have prompted earlier tumor detection if he had presented in an earlier stage. The incidence of polycythemia in male patients with functioning gonadotroph pituitary adenoma has previously been described in the literature in a few case reports.

Adrenal

ADRENAL - TUMORS

Adrenal Incidentalomas: Impact of Patient Age on Referral Rates for Endocrine Evaluation

Anthony Fryer, FRCPath, PhD[1], Sarah Hancock, N/A[1], Cherian George, FRCR, MBBCh[1], Basil George Issa, MBBCh, MD, FRCP[2], Simon Lea, PhD[1], Gillian Powner, BN[1], Julian Waldron, FRCPath[1], Anurag Golash, FRCS, MBBCh[1], Fahmy W F Hanna, MSC,MD,FRCP[1].

[1]UNIV HOSP OF N STAFFORDSHIRE, Stoke on Trent, United Kingdom, [2]Manchester University Foundation Trust, Manchester, United Kingdom.

SAT-168

It is estimated that the prevalence of adrenal incidentaloma increases with age: ~3% of those aged 50 years, rising to 10% in those >70 years (1). Given the aging population together with increased utilisation of cross-sectional imaging in the UK (eg CT urogram, MR angiogram), we explored the proportion of patients with adrenal incidentaloma by age based on current imaging trends. Furthermore, there is no information currently available on the relationship between age and pattern of endocrine referrals. We extracted data for all CT and MRI scans from Jan 2018-Oct 2019 and used key phrases in radiology reports (eg adrenal adenoma/lesion/mass/nodule/incidentaloma, incidental adrenal, indeterminate adrenal) to identify potential lesions. We also extracted data on patient age and referral patterns as identified by a logged referral or an attendance (new or follow-up) to endocrine clinic 3 months post index scan, stratified by 10 year age groups. Where possible, we excluded false hits (eg no adrenal lesion). Preliminary data showed that, of the 2604 potential lesions identified by CT and MRI scans, 78.7% were on patients aged over 60 years. The numbers of identified lesions gradually increased with age to a peak in the 71-80 year age group after which these declined. Whilst patients younger that 60 years had fewer potential lesions identified, they were more likely to be referred to endocrine services (73 out of 55 patients; 13.2%) than those in the older age group (168 out of 2049; 8.2%; p<0.001). Indeed there was a statistically significant trend towards decreasing referral with age group (Chi-squared test for trend; p<0.001). In conclusion, patients over 60 years have a higher number of potential adrenal incidentalomas. However, this group is less likely to be referred for endocrine evaluation. This is particularly concerning given the large number of scans requested and the higher prevalence of incidentalomas in this age group. This study represents preparatory work on innovations to enhance case detection, particularly in the older age groups (2). 1. Fassnacht M, Arlt W, Bancos I, et al. Management of adrenal incidentalomas: European Society of Endocrinology Clinical Practice Guideline. Eur J Endocrinol. 2016;175:G1-G34 2. Hanna FWF, Issa BG, Lea SC, George C, Golash A, Firn M, Ogunmekan S, Maddock E, Sim J, Xydopoulos G, Fordham R, Fryer AA. Adrenal lesions found incidentally: how to improve clinical and cost-effectiveness. BMJ Open Quality. 2019;In press.

Bone and Mineral Metabolism

BONE DISEASE FROM BENCH TO BEDSIDE

Prevalence and Incidence of Hypomagnesemia and Hypermagnesemia in Medical Settings

Antonino Catalano, MD, PhD, Federica Bellone, MD, Nunziata Morabito, MD, Diego Chila, MD, Saverio Loddo, MD, Francesco Corica, MD, Salvatore Benvenga, MD.

University of Messina, Messina, Italy.

SUN-343

Electrolytes disturbances are commonly observed in clinical practice. However, magnesium (Mg) disorders are often poorly considered. Our primary aim was to update the prevalence and the incidence of hypomagnesemia and hypermagnesemia in a real-life scenario. The secondary aim was to investigate the association of Mg disturbances with age and gender. Data from patients whose Mg serum levels were measured between January 2015 and December 2017 at our University Hospital were recorded. Hypomagnesemia was defined by Mg levels <1.5 mg/dL and hypermagnesemia