INTRODUCTION

- Paediatric androgen excess is a common and complex presentation.
- Achieving an underlying diagnosis is often challenging

OBJECTIVES

- To comprehensively phenotype children with biochemical androgen excess in a large cohort
- To investigate patterns and severity of simultaneously measured DHEAS, A4, and T according to underlying paediatric androgen excess conditions
- To provide guidance for the interpretation of DHEAS, A4, and T measurements using LC-MS/MS

METHODS

- Retrospective analysis of androgen profiles with simultaneous measurement of T, A4, and DHEAS in children
- Patients with ≥1 elevated androgen above the Tanner-specific reference range were further phenotyped (n=199) by detailed case note review

RESULTS

- Pre-pubertal and pubertal children with serum testosterone (T), androstenedione (A4), and DHEAS in children
- Liquid chromatography tandem-mass spectrometry (LC-MS/MS) represents the gold standard for steroids measurement

SUMMARY AND CONCLUSIONS

- DHEAS excess >8-fold was not observed in premature adrenarche, and should prompt urgent investigations
- Congenital adrenal hyperplasia was the predominant cause of an isolated increase in androstenedione, especially when severely elevated
- Our ACC case displayed DHEAS excess >25-fold, indicating that severe elevations of this androgen should be alarming
- Adolescent PCOS patients display a similar pattern of androgen excess to pre-menopausal adult patients (2), and characterised by mild DHEAS, A4 and T excess
- Our findings can guide the management of children presenting with androgen excess

REFERENCES