Introduction

Are we facing a steroid-emic?

- Usage and complications (see figure below) associated with androgenic-anabolic steroid (AAS) use are becoming increasingly common with presentation of patients to both primary and secondary care.
- There are estimated to be between 1 and 3 million lifetime users in the UK.

Audit Objective & Methods

- To quantify if this represents a significant burden in the West Yorkshire population, a clinical audit was conducted to determine what proportion of hypogonadism could be attributed to AAS usage.
- Laboratory information systems (Telepath) were interrogated, July 2020 - May 2021 for LCMS testosterone results in males from primary care only (n=614).
- LTHT perform front-line immunoassay testosterone and reflex LCMS testosterone on all results <8.0 nmol/L.

Audit Findings (1)

One Third (n=201) of testosterone results reported by immunoassay are false positives (LCMS testosterone >8.0 nmol/L) for diagnosis of hypogonadism (positive interference in immunoassay result).

Audit Findings (2)

- PPM records were reviewed (n=94) to determine the causes of hypogonadism.
- AAS usage accounts for >20% of the causes of hypogonadism (age 20-50yrs), this increases to >30% for age 20-40yrs.

Conclusions

1. Users of AAS may present with a plethora of significant health complications.
2. Cessation of AAS use will likely result in hypogonadism; this cause accounts for over one fifth of all causes of hypogonadism in the Leeds area (age 20-50yrs).
3. Increased awareness of this epidemic is important for both clinicians and laboratory staff.
4. Validation of our reflex protocol (LCMS) for low testosterone results given around one third of all male, low testosterone results reported by immunoassay are subject to positive interference.