ADEQUACY OF SUPPRESSION OF GONADOTROPINS TESTOSTERONE AND OESTRADIOL BY GONADOTROPIN RELEASING HORMONE ANALOGUE (GnRHa) TREATMENT IN ADOLESCENTS WITH GENDER DYSPHORIA

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To ascertain how effective the GnRH analogue (blocker) is in suppressing pubertal hormones in adolescents with GD

National UK Gender Identity Development Service Joint endocrine clinic UCLH, adolescents 15-18 yr

74 adolescents with GD ages 15-18y. Late/post-pubertal
25 natal males, 49 natal females
Excluded if on any other hormone treatment
Measured serum LH, FSH, testosterone, oestradiol pre- and during treatment
Gonapeptyl (triptorelin) 3.75mg i.m. every 28 days
6 monthly reviews
Results as median = 7m & interquartile range = 6-8m

Significant symptoms requiring treatment change
• Hot flushes
• Lethargy
• Mood changes:
  • Irritability
  • Anxiety
  • Depression

If symptoms bad enough for treatment change, adjustments included:
• GnRHa frequency increased
• Sex hormone add-back usually low dose oral or transdermal oestradiol

Gonapeptyl treatment:
Significantly suppressed serum LH, FSH, testosterone and oestradiol concentrations, but
• LH: detectable in 91% of patients
• FSH: detectable in 100% of patients
• Testosterone: detectable in 79% of patients
• Oestradiol: detectable in 23% of patients

No correlation of suppression by age
No correlation of response to treatment with body surface area or weight
No correlation with presence of symptoms or not (present + or absent – in tables above)

Standard dose GnRHa may not cause complete suppression of the HPG axis and may need adjusting - although principally on clinical grounds

• Monitoring not at same stage of treatment cycle
• Circadian rhythms not accounted for (but were mid-afternoon blood samples)
• Testosterone may be of adrenal origin – does that matter?
• Do we need to aim for full hormone suppression?