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

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Objectives:

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

Methods:

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

Results:

Natal males		LH U/I			FSH U/I			T nmol/l			E2 pmol/l	
	Post	Pre	% Decrease	Post	Pre	% Decrease	Post	Pre	% Decrease	Post	Pre	% Decrease
-	0.6	5.4	83	1	5	54	1	15	94	46	90	45
+	1.2	3.8	66	1	4	60	2	14	88	44	89	35

Natal females		LH u/l			FSH u/l			T nmol/l			E2 pmol/l	
	Post	Pre	% Decrease	Post	Pre	% Decrease	Post	Pre	% Decrease	Post	Pre	% Decrease
-	0.5	7.6	-1	3	5	-128	1	1	22	59	292	62
+	0.6	6.9	-57	4	6	-44	1	1	34	60	157	56

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)

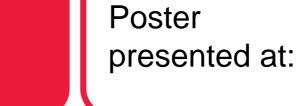
Conclusions:

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

Considerations:

- 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?











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