671

Yoo D H[1], Noh J H[1], Park S W[1], Kim J S[1]
1. *Department of Urology, Kwangju Christian Hospital, Gwangju, Korea*

THERAPY WITH HUMAN CHORIONIC GONADOTROPIN AND HUMAN MENOPAUSAL GONADOTROPIN IN MEN WITH KALLMANN'S SYNDROME

Hypothesis / aims of study
Kallmann's syndrome is characterized by hypogonadotrophic hypogonadism (HH) resulting from insufficient release of GnRH and associated with anosmia or hyposmia, which has been related to agenesis of olfactory bulbs. HH is an uncommon cause of virilization and male infertility. Human chorionic gonadotropin (hCG), or human menopausal gonadotropin (hMG) hormone is now commonly used to treat male infertility due to HH. We report on 14 male patients with Kallmann's syndrome who underwent successful treatment by combination therapy with hCG and hMG.

Study design, materials and methods
Between March 2005 and December 2015, we evaluated 14 patients with Kallmann's syndrome. All patients were subjected to physical examination including testicular volume, and to hormonal test (serum luteinizing hormone (LH), follicle stimulating hormone (FSH), total testosterone), chromosomal tests and semen analysis. We consecutively monitored at the intervals of 3, 12, 24, 36 and 48 months after hCG/hMG combination therapy. Statistical analysis was performed by Paired Student's t-test. If he want baby, we try to in-vitro fertilization.

Results
The patients mean age was 27.6±7.58 years. In 48 months, all patients showed significant improvement in Testicular volume, FSH and serum total testosterone. Testicular volume showed increase in all patients who received hCG/hMG combination therapy (2.7±2.14ml -> 6.3±3.22ml, $P<0.01$). At 48 months, 8 patients (57.1%) showed and were significant improvement in FSH (1.9±1.02mIU/ml, $p<0.025$) and in serum total testosterone (82±2.73ng/ml, $p<0.01$), respectively. Semen volume, sperm number, sperm motility, and sperm morphology were improved. Among 14 patients, 8 patients wanted to have a baby. And they had infertility treatment by in-vitro fertilization within 48 months. Finally, 3 patients (37.5%) succeeded to having a baby.

Interpretation of results
Our experience in the management of the patients with Kallmann's syndrome suggests that hCG/hMG combination therapy might be effective in improving the FSH, total testosterone level, testicular volume, sperm volume, sperm number, sperm motility, and sperm morphology. Furthermore hCG/hMG combination therapy might be effective in the patients with Kallmann's syndrome who want pregnancy.

Concluding message
HCG/hMG combination therapy might be effective in the patients with Kallmann's syndrome who want pregnancy.

Disclosures
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