Abstracts

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COST-EFFECTIVENESS OF SOMATROPIN (NORDITROPIN®) FOR THE TREATMENT OF GROWTH HORMONE DEFICIENT (GHD) CHILDREN IN A UK SETTING

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OBJECTIVES: Reduced health-related quality of life (HRQoL) is a pronounced complication in short individuals with Growth Hormone Deficiency (GHD). Treatment options for GHD children are limited; however, somatropin therapy has been shown to normalise height in childhood and adolescence compared with no treatment. The aim of this study was to estimate whether somatropin is a cost-effective treatment for GHD children compared with no treatment. METHODS: A cost-effectiveness model estimated the costs and health benefits over the lifetime of GHD children. A UK National Health Service (NHS) perspective was used. Unit costs (GBP; 2008) were obtained from relevant UK sources. A 3.5% discount rate was used. Clinical data (height, dosing and treatment duration) were obtained from a systematic literature review (only studies with n > 300). Height standard deviation scores (HSDS) were used for comparable height estimates. Utility data was derived from a published UK-based study linking HRQoL and HSDS. Several sensitivity analyses were conducted. RESULTS: Start HSDS was −2.8 (SD 0.8) and final HSDS was −1.5 (SD 0.8) with somatropin treatment. Untreated children had no HSDS gain. The mean dose was 0.023 mg/kg/day over 5.1 years duration (SD 1.8). Over a patient’s lifetime, somatropin was associated with a gain of 2.0 additional quality adjusted life years (QALYs) at an incremental cost of £30,931 compared with no treatment. As a result, somatropin was associated with an incremental cost per QALY of £25,447 compared with no treatment. Probabilistic sensitivity analysis, based on a willingness to pay threshold of £30,000 per QALY, showed that there was a high probability that somatropin was cost effective compared with no treatment, regardless of which parameters within the model were varied, showed that there was a high probability that somatropin was cost effective compared with no treatment, based on a willingness to pay threshold of £30,000 per QALY. CONCLUSIONS: The results start HSDS was −2.8 (SD 0.8) and final HSDS was −1.5 (SD 0.8) with somatropin treatment. untreated children had no HSDS gain. The mean dose was 0.023 mg/kg/day over 5.1 years duration (SD 1.8). Over a patient’s lifetime, somatropin was associated with a gain of 2.0 additional quality adjusted life years (QALYs) at an incremental cost of £30,931 compared with no treatment. As a result, somatropin was associated with an incremental cost per QALY of £25,447 compared with no treatment. 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