

CO-007 - (21SPP-11427) - PERSISTENT AND STABLE GROWTH PROMOTING EFFECTS OF VOSORITIDE IN CHILDREN WITH ACHONDROPLASIA FOR UP TO 2 YEARS

Antonio Leiva-Gea¹; Klaus Mohnike²; Ravi Savarirayan³; Louise Tofts⁴; Melita Irving⁵; William Wilcox⁶; Carlos A. Bacino⁷; Julie Hoover-Fong⁸; Rosendo Ullot Font⁹; Paul Harmatz¹⁰; Frank Rutsch¹¹; Michael B. Bober¹²; Lynda E. Polgreen¹³; Ignacio Ginebreda¹⁴; Joel Charrow¹⁵; Daniel Hoernschemeyer¹⁶; Keiichi Ozono¹⁷; Yasemin Alanay¹⁸; Paul Arundel¹⁹; Shoji Kagami²⁰; Natsuo Yasui²⁷; Klane White²¹; Howard M. Saal²²; Felipe Luna-González¹; Hiroshi Mochizuki²³; Donald Basel²⁴; Dania M. Porco²⁵; Kala Jayaram²⁵; Elena Fischeleva²⁶; Lynn Han²⁵; Jonathan Day²⁶

1 - Hospital Universitario Virgen de la Victoria, Málaga, Spain; 2 - Otto-von-Guericke-Universität, Magdeburg, Germany; 3 - Murdoch Children's Research Institute, Royal Children's Hospital, and University of Melbourne, Parkville, Victoria, Australia; 4 - Kids Rehab, The Children's Hospital at Westmead, Westmead, New South Wales, Australia; 5 - Guy's and St. Thomas' NHS Foundation Trust, Evelina Children's Hospital, London, UK; 6 - Department of Human Genetics, Emory University, Atlanta, Georgia, USA; 7 - Baylor College of Medicine, Houston, Texas, USA; 8 - McKusick-Nathans Department of Genetic Medicine, Johns Hopkins University, Baltimore, USA; 9 - Hospital Sant Joan de Déu, Barcelona, Spain; 10 - UCSF Benioff Children's Hospital Oakland, Oakland, California, USA; 11 - Department of General Pediatrics, Muenster University Children's Hospital, Muenster, Germany; 12 - Nemours /Alfred I. du Pont Hospital for Children, Wilmington, Delaware, USA; 13 - Lundquist Institute for Biomedical Innovation at Harbor-UCLA Medical Center, Torrance, California, USA; 14 - Hospital Universitario Quirón Dexeus, Barcelona, Spain; 15 - Ann and Robert H. Lurie Children's Hospital of Chicago, Chicago, Illinois, USA; 16 - University of Missouri-Columbia, Columbia, Missouri, USA; 17 - Osaka University Hospital, Osaka, Japan; 18 - Acibadem Mehmet Ali Aydinlar University, School of Medicine, Istanbul, Turkey; 19 - Sheffield Children's NHS Foundation Trust, Sheffield Children's Hospital, Sheffield, UK; 20 - Tokushima University Hospital, Tokushima, Japan; 21 - Seattle Children's Hospital, Seattle, Washington, USA; 22 - Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine, Cincinnati, OH, USA; 23 - Saitama Children's Hospital, Saitama, Japan; 24 - Medical College of Wisconsin, Milwaukee, Wisconsin, USA; 25 - BioMarin Pharmaceutical Inc., Novato, California, USA; 26 - BioMarin (U.K.) Limited, London, UK; 27 - Tokushima University Hospital, Tokushima, Japan

Introdução e Objectivos

Vosoritide is in development for the treatment of Achondroplasia. A 52-week, phase 3 study demonstrated improvement in annualized growth velocity (AGV) of vosoritide versus placebo in children with achondroplasia (5-18 years age) (Savarirayan et al, Lancet, 2020). Here we report results from an additional 52 weeks of treatment in the phase 3 extension study.

Metodologia

In the extension study, 119 children receive open label 15 µg/kg/day vosoritide. AGV, height Z-score and body proportion ratio were analyzed to assess efficacy of vosoritide.

Resultados

In children randomized to receive daily vosoritide, baseline mean (SD) AGV was 4.26 (1.53) cm/year, 5.67 (0.98) cm/year after 52 weeks of treatment and 5.57 (1.10) cm/year at the second year. Compared with baseline, mean (SD) change in height Z-score was +0.24 (0.31) and +0.45 (0.56) at Week 52 and the second year, respectively. Mean (SD) upper-to-lower body segment ratio improved by -0.03 (0.11) and -0.09 (0.11) at Week 52 and the second year, respectively. In children who switched from placebo to vosoritide, baseline AGV was 4.06 (1.20) cm/year and 3.94 (1.07) cm/year after 52 weeks on placebo. In the second year, after receiving 52 weeks of vosoritide, mean AGV was 5.65 (1.47) cm/year, the mean (SD) change in height Z-score was +0.24 (0.34), and the change in upper-to-lower body segment ratio was -0.03 (0.08). Most adverse events were mild.

Conclusões

The effect of vosoritide on growth as measured through AGV and height Z-score was maintained for up to 2-years in children with Achondroplasia, with an improvement of body proportions.

Palavras-chave : achondroplasia, phase 3, growth

