

# Sensor-augmented pump and Down syndrome: a new tool in tricky patients

*Response to "Specific use of CSII during enteral nocturnal nutrition in a child with type 1 diabetes, Hashimoto's thyroiditis, and Down syndrome"*

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We read with great interest the paper by Piccini and cols. (1) published in the July issue of this Journal.

Some years ago, we published the first report ever (to the best of our knowledge) of successful treatment of a girl with Down syndrome, Hashimoto's thyroiditis and celiac disease with continuous subcutaneous insulin infusion (2). Since then, her glyce-mic control was kept constant and, most of the time, in the target range (HbA1c in 2009:  $7.75 \pm 0.21\%$ ; HbA1c in 2010:  $7.35 \pm 0.19\%$ ; HbA1c in 2011:  $7.42 \pm 0.30\%$ ).

At the end of 2011, sensor-augmented pump was initiated (Animas® Vibe™, West Chester, PA, USA) because of both a quite high glyce-mic variability and the parents' request, and her HbA1c kept improving (HbA1c in 2012:  $7.30 \pm 0.20\%$ ; HbA1c in 2013:  $7.10 \pm 0.28\%$ ).

CSII has been recognized as effective and safe in pediatric (3) and in adult patients (4), not only in the short run, but even after many years (5). In patients with Down syn-drome and type 1 diabetes, glyce-mic control may sometimes be particularly tricky (6,7).

In our patient, as well as in the one of Piccini and cols. (1), CSII was a safe and effective way to manage diabetes.

For a successful CSII therapy in a patient with Down syndrome, whose mental function may be impaired, the collaboration of a highly motivated and compliant fami-ly is essential, as well as a skilled multidisciplinary diabetes team (8). Given all of this, pump increased the patient's and family's flexibility, as we had previously reported (2).

The significant improvement in the glyce-mic control observed, and the high level of acceptance of CSII therapy observed in both our case and in that of Piccini and cols. is worth the effort of the patient's family and of the diabetes team in ensuring that the patient has a flexible life.

Perhaps CSII therapy might be taken into account when considering insulin thera-py in patients with Down's syndrome.

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