Childhood craniopharyngioma: a single centre experience

Dario Gallo, Cristina Partenope, Salvatore Recupero, Marco Pitea, Graziano Barera, Giovanna Weber, Gabriella Pozzobon
Vita-Salute San Raffaele University - Pediatric Department San Raffaele Hospital, Milan, Italy

Background
Craniopharyngiomas are rare embryogenic malformations of the sellar and parasellar region with slow growth and high local recurrence rate. Due to their unfavourable location, presurgical hypothalamic involvement and treatment-related hypothalamic damage is frequent and lead to hypothalamic syndrome.

Objective
To compare weight gain and growth pattern of pediatric patients affected by Craniopharyngioma, regarding to hypothalamic involvement.

Materials and method:
Clinical data of 17 patients (8 female, 9 male) with childhood Craniopharyngioma, treated in our Center, San Raffaele Hospital - Milan, were retrospectively reviewed.
Median age of diagnosis was 8.1 ys with a median follow up time over 5 ys. Grading of hypothalamic involvement was based on neuroradiological and surgical assessment.
Growth hormone replacement was started to all patients after 6-12 months from treatment.

Results:
BMI sds and Height (Ht) sds of 7 of 17 patients without hypothalamic involvement (41%):

	Diagnosis	Surgery	GH start	Puberty age	Last FU visit
SDS BMI	-0,49	-0,30	-0,11	0,39	0,60
SDS HT	-1,55	-1,96	-2,25	-1,55	-0,38

10 of 17 patients with hypothalamic involvement (59%):

	Diagnosis	Surgery	GH start	Puberty age	Last FU visit
SDS BMI	0,59	1,44	1,95	1,76	2,53
SDS HT	-0,84	-1,35	-1,49	-0,87	-0,02

Conclusions:
Weight gain was significantly different between the two groups due to hypothalamic obesity. Furthermore in the Hy group weight gain was rapid and progressive.
Growth hormone treatment improved growth in all patients with height sds within the normal limits at the last follow up visit. However growth hormone beneficial on weight appeared only temporarily.

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