Gigantism

Excessive growth hormone (GH) is usually secreted by GH secreting pituitary neuroendocrine tumors and causes gigantism in juveniles or acromegaly in adults.

Limited data is available on pituitary gigantism, as it is a rare disorder.

A retrospective analysis of 14 patients with pituitary gigantism presented to a single tertiary care institute, from 1990 to 2014, was conducted.

Thirteen patients were male, while one was female. Mean age at diagnosis was 21.9 ± 6.1 years, with a mean lag period of 6.5 ± 5.6 years. Mean height SD score at the time of diagnosis was 3.2 ± 0.6. Symptoms of tumor mass effect were the chief presenting complaint in majority (50 %) of the patients, while two patients were asymptomatic. Six patients had hyperprolactinemia. At presentation, nadir PGGH (Post-glucose GH) and IGF1-ULN (x upper limit of normal) were 63.2 ± 94.9 ng/ml and 1.98 ± 0.5 respectively. All (except one patient with mild pituitary hyperplasia) had pituitary macroadenoma. Six patients had invasive pituitary neuroendocrine tumor. Transsphenoidal approach (TSS) remained primary modality of treatment in 13/14 patients and it achieved remission in 4/13 patients (30.76%) without recurrence over a median follow up of 7 years. Radiotherapy (post-TSS) achieved remission in 3/5 patients (60 %) over a median follow up of 3.5 years. None of the patients received medical management at any point of time. Conclusion: Gigantism is more common in males and remission can be achieved in majority of the patients with the help of multimodality treatment (TSS and radiotherapy) [1].

Case report

Marques et al. report a five-generation kindred with two brothers with pituitary gigantism due to AIP mutation-positive GH secreting pituitary neuroendocrine tumors and their first-cousin coincidently also having gigantism due to Marfan syndrome [2].

1)
Patt HP, Bothra N, Goel AH, Kasliwal R, Lila AR, Bandgar TR, Shah NS. Pituitary Gigantism - Experience of a Single Centre from Western India. Endocr Pract. 2015 Feb 25:1-19. [Epub ahead of print] PubMed PMID: 25716640.

2)
Marques P, Collier D, Barkan A, Korbonits M. Coexisting pituitary and non-pituitary gigantism in the same family. Clin Endocrinol (Oxf). 2018 Sep 17. doi: 10.1111/cen.13852. [Epub ahead of print] PubMed PMID: 30223298.