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Growth hormone-producing pituitary tumours: clinical profile and results of surgery.

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BACKGROUND: Growth hormone-producing pituitary tumours present with a wide variety of manifestations. The optimum diagnostic work up, management and follow up of such patients is complex and involves a multidisciplinary approach. There is paucity of data from India with regard to the clinical presentation and results of surgery for growth hormone-producing tumours. METHODS: We studied the first 50 patients presenting during 1989-94 with growth hormone-producing pituitary tumours to our centre. The work up included detailed endocrine and radiological assessment. The surgical outcome was analysed for 35 patients who were operated (trans-sphenoidal 29, transcranial 6) at our centre. RESULTS: All the patients had macroadenomas [mean (SD) diameter 3.12 (0.87) cm]. Seventy-five per cent of the patients had supra- and/or parasellar extension and 57% had visual field defects. Tumour size correlated with the preoperative basal (r = 0.57) and glucose-suppressed (r = 0.54) growth hormone levels. Thirty-three of the 35 patients operated at our centre (trans-sphenoidal 28, transcranial 5) were available for follow up (median duration 34 months). After trans-sphenoidal surgery alone, 12 of the 28 (43%) patients had normalization of growth hormone levels (post-glucose growth hormone < 5 ng/ml), and 9 of 11 (82%) showed improvement in visual fields. CONCLUSION: In India, growth hormone-producing pituitary tumours are usually large in size. The growth hormone levels correlate with the size of the tumour. These tumours can be effectively treated by trans-sphenoidal or transcranial surgery.

Mesh-terms: Adolescent; Adult; Child; Human; Human Growth Hormone :: biosynthesis; Middle Aged; Pituitary Neoplasms :: metabolism; Pituitary Neoplasms :: radiography; Pituitary Neoplasms :: surgery; Tomography, X-Ray Computed;