

Endocrine disorder acromegaly

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Answer 1 This article mainly discusses the endocrine system, which unconsciously carries out wide range of processes through chemical messengers called " hormones." Metabolism, tissue function, moods and growth development is mainly regulated by these hormones. This signaling system utilizes blood vessels, which release glands directly into the blood stream, and then they are moved throughout the body. Alexander, Fawcett and Runciman (2006. p. 162) states that, " Disorders of the endocrine system may be categorized most simply as those involving over production (hyper-secretion) and those involving under production (hypo-secretion). The hyper/hypo secretion of hormones effect and disturbs the whole balance of the system. (Alexander, Fawcett and Runciman, 2006. p. 162) Acromegaly arises in a human body, when pituitary gland continuously hyper secretes the growth hormone, causing the hormonal disturbance. Endocrine and Metabolic Diseases (2008) writes that, " Excess growth hormone stimulates hepatic secretion of insulin-like growth factor-I (IGF-I), which causes most of the clinical manifestations of acromegaly."

Answer 2: The physiology and anatomy of the endocrine system in acromegaly includes that of the growth hormone while of the nervous system includes that of the pituitary gland. Growth hormone is a protein which most commonly contains 191 amino acid residues and has two main forms known as 20 K and 22 K. It is secreted in a pulsatile fashion from the anterior pituitary gland and is fundamental for its physiological effect (Varela-Nieto & Chowen, 2005).

Pituitary gland is a pea-sized gland attached to the hypothalamus by a stalk and located at the base of the brain (Alexander, Fawcett, & Runciman, 2006). One of the main functions of this gland is to regulate the levels of GH and IGF-1 in the blood and also homeostasis in the body. Some of its functions include regulation of blood pressure, thyroid gland function, metabolism and secretion of ADH among others.

Answer 3: Successful treatment of acromegaly not only reduces the levels of GH and IGF-1 to normal but also alleviates the pressure from the growing pituitary hormone exerts on the areas of the brain. Dopamine analogues such as bromocriptine does the latter but, somatostatin analogues like octreotide and lanreotide does both (Hansen, 2006). Other treatments include surgery and radiotherapy for reducing the size of the tumor (Une, 2007). Combining dopamine analogues with somatostatin analogues produces more effective results than either does alone. The somatostatin analogues effect on glucose homeostasis is minor and this increase was controlled by administrating octreotide.

Answer 4: The Endo's products continue to contribute significantly to future growth of pharmaceutical industry. Present research is investigating the safety and effectiveness of this new drug along with its dosage, schedule and combinations of somatostatin analogs and GH receptors. The suggestions for the patients of acromegaly in this are that it is safe for the patient to use this new drug because it is working well with the earlier first medication groups of SSAs and Dopamine agonists. Bankhead, C. (2009) quotes Catherine Lesage, who writes that, " The activity we observed suggests this compound should be effective in normalizing the hormonal profiles of patients with acromegaly."

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The future use of this drug will take an account of the presently carried out research which insists that there is a good interaction between these drugs. Dr. Lesage was quoted in the article who writes that. " Targeting both receptors might be more effective than focusing on one." The observations and research also " provided a rationale for development of BIM 23A760, a chimeric compound that contains structural elements of somatostatin analogs and dopamine agonists." (Bankhead, C. 2009).

References

Alexander, M. F., Fawcett, J. N., & Runciman, P. J. (2006). *Nursing practice: An Introduction*. USA: Elsevier Health Sciences.

Bankhead, C. (2009). ENDO: New Acromegaly Drugs Show Promise. Retrieved June 29, 2009, from [http://www. medpagetoday. com/MeetingCoverage/ENDO/14784](http://www.medpagetoday.com/MeetingCoverage/ENDO/14784)

<https://assignbuster.com/endocrine-disorder-acromegaly/>

Endocrine and Metabolic Diseases (2008). Acromegaly. Retrieved June 29, 2009, from <http://www.endocrine.niddk.nih.gov/pubs/acro/acro.htm>

Hansen, H (2006). Somatostatin Analogs for HRPcA. Retrieved June 29, 2009, from <http://www.hrpa.org/somatostatin.htm>

Une, K. N. (2007). Endocrinology. Retrieved June 29, 2009, from <http://www.medstudents.com.br/endoc/endoc8.htm>

Varela-Nieto, I, & Chowen, J. A. (2005). The Growth Hormone/insulin-like Growth Factor Axis During Development. Switzerland: Birkhuser.