Society for Endocrinology media release

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New guidelines highlight need for immediate treatment for pituitary apoplexy

Patients with suspected pituitary apoplexy need immediate treatment by specialist medical teams, new guidelines published by the Society for Endocrinology state. These guidelines will be presented today at the Society for Endocrinology annual conference and have been published in the journal *Clinical Endocrinology*. They highlight the need for quick diagnosis as well as areas for more research in this field.

Pituitary apoplexy is caused by either an infarction (death of an area of tissue) or haemorrhage in the pituitary gland usually in association with the presence of a pituitary tumour. Its prevalence is estimated at 6.2 cases per 100,000 people in the UK[1]. It requires urgent medical diagnosis and treatment but the condition is often missed or diagnosed late. Early treatment can prevent permanent damage to eye nerves and the nerves controlling eye movement. Symptoms are caused by a build up of pressure in the cavity surrounding the pituitary and include sudden onset headache, vomiting and nausea, paralysis of some eye movements, visual impairment and decreased consciousness. In general, patients with this condition first present to accident & emergency with a severe headache.

The guidelines highlight the need for individual management of each patient according to history and symptoms. The guidelines state:

- Pituitary apoplexy should be considered in all patients presenting with acute severe headache, regardless of whether or not they exhibit other symptoms, particularly if they have been previously diagnosed with a pituitary tumour. Initial assessment should include a detailed history focusing on the symptoms of pituitary dysfunction (e.g. hypogonadism) followed by a thorough physical examination, including cranial nerves and visual fields.

- An urgent MRI scan should be carried out on all patients with suspected pituitary apoplexy. This provides a diagnosis in over 90% of patients. CT scans should only be used if MRI is contraindicated or not possible, as they provide a conclusive diagnosis in only 21-28% of cases.

- Acute secondary adrenal insufficiency is seen in two thirds of patients and is the major cause of death associated with this condition. If suspected, patients should immediately be given intravenous cortisol replacement in anticipation of the results of any confirmatory tests.

- Nearly 80% of patients will be deficient in one or more pituitary hormones at presentation. All suspected patients should have urgent blood samples taken to check their electrolytes and serum levels of pituitary hormones.

- There are two main treatment options for pituitary apoplexy: conservative management versus surgical management. There are no evidence based criteria to justify the clinical decision between these two approaches. However, this decision should be made by a multidisciplinary team including experts in endocrinology, neurosurgeon and ophthalmology.

- If surgery is decided upon, this should be carried out by an experienced pituitary surgeon rather than the on-call neurosurgical team, unless immediate surgical intervention is needed.

- All pituitary apoplexy patients require long-term management, the details of which depend upon the nature of the underlying pituitary tumour and the success of treatment. As standard, all patients should have a full endocrine review at 4-8 weeks and a MRI scan at 3-6 months following the event. They should also receive an annual clinical review, preferably in a joint endocrine/neurosurgical clinic.

Prof John Wass, Chair of the Pituitary Apoplexy Working Group, said:

"The Society for Endocrinology wants to ensure that all patients receive the safest and most effective treatment for pituitary conditions. Following a thorough review of the literature, these guidelines aim to provide clinicians with evidence-based information on the diagnosis and management of patients with suspected pituitary apoplexy.

"Pituitary apoplexy is a medical emergency and it is very important that this is recognised and patients are swiftly assessed by specialist medical teams to ensure they receive appropriate treatment. Many patients are suffering from secondary adrenal insufficiency when they first present and immediate cortisol replacement can save lives.

"In developing these guidelines, we found there is a lack of randomized clinical trials conducted in this area to assess the best treatment course for patients. We now call for further studies to be conducted to increase our knowledge and allow us to provide patients with more personalised treatment plans."

General information

These guidelines were produced by the Society for Endocrinology and are endorsed by the Pituitary Foundation, the Royal College of Physicians and the British Society of Neurological Surgeons. To develop the guidelines, the Working Party undertook a thorough review of the published studies in this area, along with holding a multidisciplinary meeting. Prior to

publication, the guidelines were subjected to refereeing from experts from a range of disciplines including endocrinologists, neurosurgeons, ophthalmologists and neuroradiologists.

These are the first UK guidelines to specifically cover the diagnosis and management of pituitary apoplexy. No declarations of interest were received from any of the professional membership of the group.

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Notes to editors:

The guidelines are the subject of a presentation at the Society for Endocrinology annual meeting taking place at 9:30-10:15, Thursday 14 April 2011. They have been published in full in the journal *Clinical Endocrinology* (2011), **74**, 9-20. DOI: 10.1111/j.1365-2265.2010.03913.x

For a PDF copy of the full guidelines, please click on the link above.

The 2011 Society for Endocrinology annual meeting is Britain's biggest scientific meeting on hormones, and is taking place at the Birmingham International Convention Centre, Birmingham, from 11-14 April 2011. For the full programme, please see http://www.endocrinology.org/meetings/2011/sfebes2011/

[1]Fernandez et al. (2010). *Clinical Endocrinology*, **72**, 377-382.

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The **Society for Endocrinology** is Britain's national organisation promoting endocrinology and hormone awareness. For general information, please visit our website: http://www.endocrinology.org

The **Pituitary Foundation** is a charity working in the United Kingdom and Republic of Ireland supporting patients with pituitary conditions, their carers, families and friends. Our aims are to offer support through the pituitary journey, provide information to the community and act as the patient voice to raise awareness and improve services. http://www.pituitary.org.uk/

The **Royal College of Physicians of London** provides a huge range of services to its 25,000 Members and Fellows and other medical professionals. These include delivering examinations, training courses, continuous professional development and conferences; undertaking clinical audits; publishing newsletters, guidelines and books through to maintaining the College's historical collections. The RCP also leads medical debate, and lobbies and advises government and other decision-makers on behalf of its members. http://www.rcplondon.ac.uk/

The **Society of British Neurosurgeons** supports the study and advancement of neurosurgery. http://www.sbns.org/

ABSTRACT

UK guidelines for the management of pituitary apoplexy

Pituitary Apoplexy Guidelines Development Group: May 2010
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Classical pituitary apoplexy is a medical emergency and rapid replacement with hydrocortisone maybe life saving. It is a clinical syndrome characterized by the sudden onset of headache, vomiting, visual impairment and decreased consciousness caused by haemorrhage and/or infarction of the pituitary gland. It is associated with the sudden onset of headache accompanied or not by neurological symptoms involving the second, third, fourth and sixth cranial nerves. If diagnosed patients should be referred to a multidisciplinary team comprising, amongst others, a neurosurgeon and an endocrinologist. Apart from patients with worsening neurological symptoms in whom surgery is indicated, it is unclear currently for the majority of patients whether conservative or surgical management carries the best outcome. Post apoplexy, there needs to be careful monitoring for recurrence of tumour growth. It is suggested that further trials be carried out into the management of pituitary apoplexy to optimize treatment.