Harvey Cushing's interest in the pituitary gland resulted in more than 50 publications over a period of 30 years. The title of one of these, "Is the pituitary gland essential to the maintenance of life?", indicates how little was known about this structure in 1909. During the years that followed, Dr. Cushing played a significant role in the elucidation of pituitary function by closely examining clinical examples of pituitary malfunction. He established the surgical treatment of the pituitary adenomas and crystallized the concepts of hypopituitarism and hyperpituitarism.

Cushing's interest in patients with pituitary disorders was not limited to their scientific aspects.

"Cushing was always fascinated by the circus, particularly by the sideshows where he obtained histories of the giants, fat women, and midgets, and any other freak that might happen to be on display. In this way he made friends with many circus personalities and over the years managed to keep in touch with several well-known giants and midgets. Sir Arthur Keith, the distinguished curator of the Hunterian Museum, consented some years ago, on Cushing's insistence, to removing the top of the skull of the famous Irish giant whose skeleton had long been on display in the Museum, in order to ascertain the condition of the sella turcica where the pituitary body would have been. Sure enough, the sella was grossly enlarged and there was evidence that there had been a sizeable intracranial extension of the pituitary tumor."

"But H. C. was as much interested in dwarfs as in giants, and many of his friends will remember that during the hot summer of 1929 after the family went to Little Boar's Head he surreptitiously filled the house with dwarfs on whom an attempt was being made to test the efficacy of some growth hormones recently purified by Herbert Evans. . . ."

One of the circus patients was the subject of a letter which H. C. felt impelled to send to Time magazine after she had been made the object of ridicule in a previous issue. The letter, which Time published under the caption 'Skin Deep', ran thus:

"Sirs: . . . May I accordingly tell you something of the woman whose picture you published on p. 17 of Time, May 8, 1937 under the caption of 'Uglies'? This unfortunate woman who sits in the sideshow of Ringling Brothers 'between Fat Lady and Armless Wonder' and 'affects white lace hats, woolen mittens and high laced shoes' has a story which is far from mirth-provoking. Could it have been written up for you by O. Henry, it would have provoked tears rather than laughter. The facts are as follows: She is, as you say, a peasant of Kent and four times a mother. The father of these four children, a truck gardener, died some years ago and left her their sole support. She, previously a vigorous and good-looking young woman, has become the victim of a disease known as acromegaly. This cruel and deforming malady not only completely transforms the outward appearance of those whom it afflicts but is attended with great suffering and often with loss of vision.

"One of Mr. Ringling's agents prevailed upon her to travel with the circus and to pose as the 'ugliest woman in the world' as a means of livelihood. Mr. Ringling is kind to his people and she is well cared for. But she suffers from intolerable headaches, has become nearly blind, and permits herself to be laughed at and heckled by an unfeeling people in order to provide the wherewithal to educate her four children. Beauty is but skin deep. Being a physician, I do not like to feel that Time can be frivolous over the tragedies of disease."

Because of Cushing's interest in chromophobe and acidophile adenomas of the anterior hypophysis, many patients with these tumors were referred to him. Of the 2023 patients with verified brain tumors seen in his clinic, 360 had pituitary adenomas.

"Among his pituitary patients Cushing over the years had observed a special group with a condition which had been somewhat vaguely labelled 'polyglandular syndrome.' They were seldom subjected to operation because, unlike his other pituitary cases, they did not exhibit visual difficulty or signs of increased intracranial pressure; and since none had come to autopsy he had had no
opportunity of definitely establishing the fact that their difficulties were of pituitary origin. . . .

Until 1930 Cushing had never seen a basophilic tumor of the pituitary but he had often suspected that such might occur. . . .

"... It is a matter of some interest that at the time of Cushing’s original paper on basophilism no one of his own cases had yet come to autopsy. Three patients, however, who died after the paper was published all proved at autopsy to have basophilic adenomas."39

"... Cushing first described his deductions concerning the basophil tumors before the New York Neurological Society on 5 January 1932. He presented the same material again at the Harvard Medical Society on 29 February, and the full text appeared in the March number of the Johns Hopkins Hospital Bulletin."39

During the century prior to 1932, basophil adenomas had been described (as unimportant curiosities), experiments had shown that relationships existed between the pituitary gland and the adrenal cortex, and the clinical changes associated with adrenal cortical hyperfunction had been recognized.49 Dr. Cushing’s observations substantiated and correlated these findings. 25, 27-29, 38, 59, 63-64.

Ideas about the underlying pathological lesions have changed since 1932, but because of the classical descriptions by Cushing, the clinical picture presented by these patients has become widely known as Cushing’s syndrome.49

"For those who believe that the originality of most men reaches its peak before the age of forty and that it would be a good thing if most of us were chloroformed at sixty, it is a fact of some significance that one of Cushing’s most original single contributions to clinical medicine was made in his sixty-third year as he was about to retire."39

References


45. HOBHAX, G. Some of Harvey Cushing’s contributions to neurological surgery. *J. Neurosurg.*, 1944, 1: 3-22.