New Information Concerning the Irish Giant

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ALTHOUGH John Hunter and Harvey Cushing were separated by more than a century they joined in the evaluation of the famed Irish giant, Charles O’Brien.

Both men were primarily surgeons, yet there are unique parallels in their broader achievements. Hunter’s interests in inflammation, bone growth, pathological anatomy and his biological collection are mirrored in Cushing’s interests in typhoid infections, endocrinology, neuropathology and his collection of medical books. The “Hunterian chancre” and the “Cushing syndrome” brought each man’s name into everyday medical usage, yet their greatest achievements were probably as surgical teachers. Hunter has been called the father of surgery and Cushing is generally regarded as the father of neurosurgery.

This report attempts to verify certain aspects of the giant’s life and death, pointing out the interest both men had in the skeleton. Skull films of the giant have been obtained for the first time and demonstrate the classical features of acromegaly.

Charles Byrne, later called O’Brien, was born in Littlebridge, Ireland, and his huge size was attributed to his conception on the top of a haystack. His parents were of normal size but in a nearby village twin sons were born to the Knipe family, supposedly related to Byrne, and grew to over seven feet tall. As a child Byrne “grew like a cornstalk” but was unpopular because he was “always dribbling and spitting and troubled with pains.” In late adolescence he was exhibited at local fairs by Joe Vance who as his agent brought him to London at the age of twenty-one in April, 1782.6

He was first exhibited in London at Spring Gardens with advertisements claiming: “He is the tallest man in the world. His height is eight feet two inches and in full proportion accordingly.” A Rowlandson cartoon (Fig. 1) and etchings by Kay (Figs. 2 and 3) attest to his impressive stature. The initial admission fee was half a crown but with a decline in business the charge was dropped to one shilling. Enough money was accumulated, however, to enable the giant to possess a 700 pound note and to support his habit of alcoholic excess. On April 23, 1783, a local newspaper recorded:

“The Irish Giant, a few evenings since, taking a lunar ramble was tempted to visit the Black Horse, a little public house facing the King’s mews, and before he returned to his own apartments found himself a less man by the loss of 700 pounds in bank notes which had been taken from his pocket.”

Shortly thereafter, on or about June 1, 1783, the giant died suddenly at the age of twenty-two and the Annual Register on June 30th published the following account:

“In Cockspur Street, Charing Cross, aged only 22, Mr. Charles Byrne, the Irish Giant, whose death is said to have been precipitated by excessive drinking to which he was always addicted, but more particularly since his late loss of about all his property which he had simply invested in a single bank note of 700 pounds. In his last moments he requested that his ponderous remains might be thrown into the sea in order that his bones might be placed far out of reach of the chirurgical fraternity in consequence of which the body was shipped on board a vessel to be conveyed to the Downs to be sunk in 20 fathoms of water. We have reason to believe, however, that this report is merely a “tub thrown out to the whale.” It is said that John Hunter bribed the undertaker to substitute stones for the body, forwarding the body to Hunter who took it in his carriage to Earl’s Court.”

The enthusiastic and competitive interest in the giant’s body is shown in the following news reports:

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June 5, 1783: "The whole tribe of surgeons put in claims for the poor departed Irish giant and surrounded his house just as Greenland harpooners would an enormous whale. One of them has gone so far as to have a niche made for himself in the giant's coffin."

June 13, 1783: "Since the death of the Irish Giant there have been more physical consulta-
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June 16, 1783: "So anxious are the surgeons to have possession of the Irish Giant that they have offered a ransom of 800 guineas to the undertakers. This sum being rejected they are determined to approach the churchyard and unearth him."

June 18, 1783: "The body was shipped on board a vessel last night in order to be conveyed to the Downs where it is to be sunk in 20 fathoms of water. The body hunters, however, are determined to pursue their valuable prey even to the profoundest depth and have therefore provided a pair of diving bells."

It is not known exactly how the remains came into the possession of John Hunter. The unverified popular account is that Hunter, seeking to acquire the giant's skeleton hired a Mr. Howison to shadow Byrne with the hope that he would be on hand for the giant's death which Hunter felt was imminent. The giant realized Hunter's design and prepaid the undertakers, instructing them that his remains were to be buried at sea. The same account holds that on the night of Byrne's death Hunter and Howison plied the undertakers with strong drink and after a bribe of 500 pounds spirited the body to some hideaway where it remained for two years before the skeleton appeared in John Hunter's collection.

Hunter's collection of biological specimens numbered 13,000 and became the John Hunter Museum, now maintained by the Royal College of Surgeons. Most of the specimens have survived the trials of time, including the bombing of the museum in 1940, and the skeleton of Byrne still stands as a focal point of interest.

Hunter's high regard for his prize is implied in the inclusion of the feet of the giant in the Joshua Reynolds portrait (Fig. 5) painted in 1783, the year of the giant's death. This disputes the legend that it was necessary for Hunter to hide the remains for two

Fig. 4. The skeletons of the Irish Giant and the Sicilian Dwarf as exhibited in the John Hunter Museum. A one foot rule can be seen between the Giant's legs.

Fig. 5. An engraving by William Sharp published in 1788 copied from the original Joshua Reynolds portrait of Hunter which now hangs in the Royal College of Surgeons. The feet of the Irish Giant can be seen in the upper right corner.
years before exhibiting the skeleton in his collection.

The skull of the giant was not opened by Hunter, prompting Harvey Cushing to conclude 150 years later that "his passion as a collector momentarily exceeded his thirst for knowledge."2

In 1783 the function of the pituitary was not clear. Galen and Vesalius had taught that the pituitary lubricated the nose (pituita, slime). Magendie later concluded that the pituitary was the cerebral lymph gland which discharged waste products of the brain into the blood and it was this view that was still prevalent when acromegaly was described by Pierre Marie in 1886.9

A few years later, acromegaly and Giantism were linked to pituitary tumors and with the proposal of a "hormone system" in 1902, the endocrine nature of the disease was suspected. Harvey Cushing, in his training with Halsted, had become versed in thyroid and parathyroid physiology and as a neurosurgeon extended his endocrine interest to the pituitary. In 1909, Cushing made the earliest firm proposals that acromegaly and giantism resulted from hyper-secretion of growth hormone9 and in 1912 emphasized the dominant role of the pituitary in the endocrine system.4

A renewed interest in the skeleton of the Irish giant followed the developments in endocrine understanding and as Fulton records:

"Sir Arthur Keith, curator of the John Hunter Museum, consented some years ago on Cushing's insistence to removing the top of the skull of the famous Irish Giant. . . . The sella was grossly enlarged and there was evidence that there had been a sizeable intracranial extension of the pituitary tumor."7

Keith later published drawings and measurements of the skull (Fig. 6).

"The pituitary fossa . . . is greatly enlarged, measuring 21 mm. anteroposteriorly, 24 mm. from side to side and 11 mm. in depth. There had been clearly a tumour of the pituitary . . . which had grown upwards and forwards."7

In 1930 Cushing reminisced:

". . . the enlarged fossa . . . was not detected until Arthur Keith's inquisitive finger was put into it more than a century later."7

Mr. W. E. Thompson, longtime laboratory aide to Keith at the Hunter Museum, recalled personally to the author in 1963 that it was the commonly held view of the museum personnel that Byrne's skull was opened through the joint efforts of Cushing and Keith around 1909.10 Cushing's friendship with Keith is well known, and in his diary he speaks of spending time at the museum in 1909.

Skull films of the giant have not been previously obtained, but at the author's request x-rays were taken in 1963 by the current curator of the John Hunter Museum, Miss Jessie Dobson. These films have been graciously provided for publication (Fig. 7). The characteristic changes of acromegaly are apparent in the thick bone, large sinuses and wide protruberant mandible. Radiographically the sella shows some erosion of the dorum sellae and measures 19 mm. in length and 7 mm. in depth. These dimensions are slightly less than those established by Keith but still large by present day criteria.

If John Hunter had opened the giant's skull in 1783 endocrinology might have had
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Fig. 7. Skull films of the Irish Giant taken in 1963. The cranial defect was made by Harvey Cushing and Sir Arthur Keith.

an earlier birth. His genius was in part due to his ability to give meaning to chance observations and as Cushing noted "he could scarcely have overlooked the hypertrophic gland with its enlarged fossa."

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References
5. Dobson, J. Unpublished collected papers.