

# The possibilities and impossibilities of treating acromegaly 50 years ago illustrated by the Diane Arbus photograph, A Jewish giant at home with his parents in the Bronx, N.Y. 1970

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## Summary

The iconic photograph 'A Jewish giant at home with his parents in the Bronx, N.Y. 1970' by the famous American photographer Diane Arbus (1923–1971) shows the 2.34 m (7 ft. 8¼ in.) acromegalic giant Eddie Carmel (1936–1972) and his parents in the living room of their New York home. The picture is a typical example of Arbus' style. The relationship between the artist and the tall subject is described. A growth hormone-secreting pituitary macroadenoma was unsuccessfully treated with two cycles of pituitary radiotherapy achieving a 7000 rad cumulative dose and by incomplete pituitary surgery. Hypopituitarism was treated according to medical standards in the 1960s and 1970s. The giant patient died of increased intracranial pressure and at autopsy a residual acidophil pituitary macroadenoma was found, but also a perisellar meningioma which was most probably induced by the high dose of pituitary radiotherapy. The case report illustrates the possibilities and impossibilities of treating acromegaly 50 years ago and demonstrates the potential risks of high dose pituitary radiotherapy (in acromegaly).

## Learning points:

- Acromegaly is a very old disease.
- Therapy for acromegaly has evolved over the decades.
- In art museums one can come across artistic impressions of endocrine disorders.
- People suffering from disfiguring endocrine disorders like acromegaly were pre-WW2 'exposed' in theaters and circuses.
- High dose pituitary radiotherapy can be associated with secondary brain tumor formation.

## Background

### Gallery and art museum collections

A gelatin silver print photograph by Diane Arbus of Eddie Carmel with his parents in the living room of their home in the Bronx, New York City, NY, USA in 1970, measuring 37.8 × 37.5 cm (14 7/8 × 14¾ in.), is in the collection of a selection of eminent art museums and galleries like the Princeton University Art Museum (Princeton, NJ, USA), The Met (The Metropolitan Museum of Art, New York City,

NY, USA), the Philadelphia Museum of Art (Philadelphia, PA, USA), the Minneapolis Institute of Art (Minneapolis, MN, USA), MOCA (The Museum of Contemporary Art, Los Angeles, CA, USA), Harvard Art Museums/Fogg Museum (Cambridge, MA, USA), MFAH the Museum of Fine Arts (Houston, TX, USA), J. Paul Getty Museum (Los Angeles, CA, USA), The Herbert F. Johnson Museum of Art at Cornell University (Ithaca, NY, USA), and the National Galleries of



**Figure 1**

'A Jewish giant at home with his parents in the Bronx, N.Y. 1970'. Gelatin silver print photograph by Diane Arbus of Eddie Carmel with his parents in the living room of their home in the Bronx, New York City, NY, USA in 1970, measuring 37.8 × 37.5 cm (14 7/8 × 14 3/4 in.). Photograph © The Estate of Diane Arbus.



Scotland (Edinburgh, UK) (1, 2). The official title given to this photograph is 'A Jewish giant at home with his parents in the Bronx, N.Y. 1970' (Fig. 1).

## Diane Arbus

Diane Arbus was born as Diane Nemerov on 14 March 1923 in New York City. Her father, David Nemerov, was president and board chairman of a well-known department store, Russeks Fifth Avenue, Inc. and her mother, Gertrude was the daughter of the co-founder of Russeks department stores. Her older brother Howard was a distinguished poet and critic. At the age of 18, Diane married the actor and photographer Allan Franklin Arbus (1918–2013). Allan and Diane Arbus had two children, photographer Amy Arbus (b 1954), and writer and art director Doon Arbus (b 1945). The couple ran a successful fashion photography business, but from 1956 Diane started to dedicate herself to her own characteristic work. In 1963 and 1966 she was awarded John Simon Guggenheim Fellowships. She taught photography at Parsons School of Design (New York City), Rhode Island School of Design (Providence, RI, USA), and Cooper Union (New York City). The couple separated in 1959, and in 1969 she officially divorced Allan. Diane Arbus committed suicide in New York City, aged 48, on 26 July 1971 (1, 2, 3) (Diane Arbus – Wikipedia).

Diane Arbus distinguished herself by photographing subjects to highlight the importance of a decent representation of all people. Therefore, she worked with a wide range of subjects like strippers, carnival performers, transvestites, nudists, people with mental disabilities, people of short stature, and elderly people (1, 2, 3) (Diane Arbus – Wikipedia). It is well-known that Arbus spent time with her subjects before taking their pictures. Arbus' work was influenced by the renown photographers Matthew Brady, Bill Brandt, and Eugène Atget. She studied with Berenice Abbott and Lisette Model and grouped with other contemporary photographers such as Robert Frank and Saul Leiter of the New York School (1, 2, 3) (Diane Arbus – Wikipedia).

## Case report and investigations

### Eddie Carmel – social background 1

Eddie Carmel was born on 16 March 1936 as Oded Ha-Carmeili in Tel Aviv (Mandatory Palestine –presently Israel) as the only son to the Orthodox Jewish immigrants Itzhak and Miriam Ha-Carmeili. Both parents were average-sized, but – at least according to Eddie Carmel's promotional

material – his Polish maternal grandfather (whom he named 'Europe's tallest Rabbi') was 2.26 m (7 ft. 5 in.). Eddie Carmel developed symptoms of acromegalic gigantism from the age of 15 years, when he had grown 15 cm (6 in.) over 2 years, achieving a height of 1.93 m (6 ft. 4 in.). For publicity's sake, however, he claimed he weighed 7 kg (15 pounds, 4 ounces) at birth and stood 1.83 m (6 ft.) tall at the age of 7. He also claimed that he descended from Goliath, the Philistine giant. When he was a child, the family moved to the Bronx, New York City (NY, USA) (2, 4) (Eddie Carmel - Wikipedia). As an adult he advertised his height as a record-breaking 2.74 m (9 ft.) and his weight as 242.5 kg (535 pounds), but more realistically is an estimation of his height measuring 2.34 m (7 ft. 8¼ in.) Eddie Carmel - Wikipedia (4, 5).

### Eddie Carmel - medical history

At the age of 15, homonymous hemianopsia in combination with an enlarged sella turcica most probably caused by a growth hormone-secreting pituitary tumor was diagnosed and he was treated with conventional radiotherapy (3000 rad) to the pituitary area. This resulted in an improvement in visual fields (6). Because of continued growth to 2.03 m (6 ft. 8 in.), he was treated with an additional 4000 Rad through multiple portals over the ensuing 2 years. However, he continued to grow until the age of 28 when he reached a final height of 2.34 m (7 ft. 8¼ in.). At that time (1964), his growth hormone levels were still elevated and not suppressible with glucose. Skull radiographs showed marked enlargement of the sella turcica and erosion of the sellar floor and posterior clinoids. The frontal sinuses were enlarged. Marked prognathism was present. Other radiographs showed characteristic changes associated with acromegaly and gigantism, including enlargement of the hands and feet with widening of the terminal tufts, as well as kyphoscoliosis. Marked 'arthritic changes' were noted in both knees (6). In 1964, the neurosurgeon Bronson S. Ray (1904–1993) of the New York Hospital – Cornell Medical Center (New York City) performed a right frontal craniotomy. A large pituitary macroadenoma extending posteriorly beyond the sella turcica and lying along the pons was only partially removed. Postoperatively, right oculomotor nerve palsy was diagnosed, but this resolved in 3 months. No postoperative endocrine studies were performed. He received replacement therapy with oral desiccated thyroid and cortisone and with monthly i.m. injections of testosterone enanthate. In the postoperative period, the growth hormone levels continued to be elevated and nonsuppressible with an oral glucose load. On the basis of the medical literature at that time,



medroxyprogesterone acetate (Provera) treatment was started in order to reduce the elevated growth hormone levels, but this proved to be unsuccessful. However, Eddie Carmel did report subjective improvement in joint pains, increased vigor, and an improved ability to walk and refused to discontinue the medroxyprogesterone despite the skepticism of his physicians with regard to the efficacy of this drug. In 1971, hypertension was diagnosed and treatment with oral antihypertensive drugs was started (6).

On 24 July of 1972, Eddie Carmel checked in for the last time to the Montifiore Hospital & Medical Center in the Bronx, New York (6). He was confined to a wheelchair most of the time because of progressive joint complaints. He had become increasingly depressed and was treated with amitriptyline. The initial impression was that the somnolence he presented with was the result of surreptitious ingestion of tranquilizers and amitriptyline was, therefore, discontinued. However, during admission Eddie Carmel suddenly became unresponsive, developed fixed dilated pupils, and a febrile spike of 105°F (40.5°C). Ventricular tachycardia and cardiac arrest ensued for the first time and he was successfully resuscitated. However, he developed an aspiration pneumonia and increased intracranial pressure was diagnosed. On 14 August 1972, Eddie Carmel suffered a second cardiac arrest and died, aged 36 (6).

## Outcome

### Eddie Carmel - autopsy

The autopsy revealed typical features of gigantism and acromegaly characterized by generalized organomegaly, osteoporosis, osteoarthritis, and severe kyphoscoliosis. The adrenal glands showed atrophic changes. Widespread (aspiration) pneumonia was noted. The cranial cavity was essentially normal, although it appeared disproportionately smaller than the skull due to a massive thickening of the bones. The brain was swollen and weighed 1600 g. The effect of elevated intracranial pressure was evident by herniation of the cerebellar tonsil. An acidophil pituitary macroadenoma (and fibrosis) with suprasellar and left parasellar expansion, with similar pathology to the previously surgically incompletely removed pituitary macroadenoma (in 1964) was found. The basal cisterns were obliterated by suprasellar extension of the adenoma. However, in the right perisellar region another large mass, finally diagnosed as fibroblastic meningioma, was present. This meningioma extended to the middle cranial fossa and produced a deep indentation of the temporal lobe.

In that era, reports on meningiomas and sarcomas arising as potential consequences of previous radiation therapy to the pituitary and brain had already been published in the medical literature (7, 8, 9, 10). Eddie Carmel had received altogether 7000 rad to the pituitary region, whereas generally the standard upper limit of 4500--5000 rad was applied to pituitary tumors. Therefore, the possibility of a causal relationship between the pituitary radiotherapy and the meningioma could not be excluded by the physicians (1).

## Eddie Carmel - social background 2

### Showbusiness

Carmel dropped out of college in 1957 and tried to break into show business with an emphasis on comedy. Together with his friend, Irwin Sherman, they invented funny comedy events like launching a tall people's crusade against the Volkswagen Beetle car, known for its relatively small size. Billed as "The Happy Giant", "The Jewish Giant", "The Cowboy Giant", or "Big Eddie", he appeared in several carnival sideshows including appearances at Hubert's Dime Museum and Flea Circus in Times Square, New York City in 1969. Carmel also starred in two low-budget B films, the science-fiction horror movie 'The Brain that Wouldn't Die' in 1962 and the soft-core porn movie: '50,000 B.C. ('before clothing')' in 1963 Eddie Carmel - IMDb. He also made 45-rpm rock record in 1962 with two tracks, 'The Happy Giant' and 'The Good Monster' and made several TV appearances. He even formed his own rock band, 'Frankenstein and the Brain Surgeons'. For a time he also worked as a professional wrestler under the name 'Eleazer Carmel' and was named 'the wrestling champion of Israel' and in the late 1960s he worked as a comedian in a night club in Los Angeles (CA, USA). From 1960 to 1968, he traveled with carnivals and circuses, including 'Milton Levine's World of Mirth' and 'The Ringling Brothers, Barnum & Bailey Circus' where he also sold souvenir rings. He was presented as 'The World's Greatest Giant' and 'The Tallest Man on Earth'. His height was billed at an exaggerated 2.68 m (8 ft. 9 in.) tall. When not working for the circus, he toured the country advertising various businesses, and spent some of his leisure time living in New York City with his parents. With his deep voice, he became a popular artist for television and radio commercials. Eddie Carmel retired from circus life in 1969 (aged 33) when he could no longer get up on the platform and finally became confined to a wheelchair (4) Eddie Carmel - Wikipedia.



## Eddie Carmel – the photograph

Arbus already took pictures of Eddie Carmel at the Ringling Brothers and Barnum & Bailey Circus in 1960, but a decade elapsed before she made one of her iconic pictures, ‘A Jewish giant at home with his parents in the Bronx, N.Y. 1970’ (Diane Arbus - Wikipedia) (1). In May 1968, Diane Arbus wrote to Peter Crookston, an editor of the Sunday Times Magazine, ‘I know a Jewish giant who lives in Washington Heights or the Bronx with his little parents. He is tragic with a curious bitter somewhat stupid wit. The parents are orthodox and repressive and classic and disapprove of his carnival career. They are a truly metaphorical family. When he stands with his arms around each he looks like he would gladly crush them. They fight terribly in an utterly typical fashion which seems only exaggerated by their tragedy’ (1, 2, 3). The photograph reveals the unhappy family dynamics. An unshaven Eddie Carmel, who is not able to stand up erect without a cane, bends over to his parents. Father Yitzhak glares at him coldly and disapproving and mother Miriam gazes up at him in wonder. According to Arbus, father and son couldn’t endure each other. Father Yitzhak is dressed in a stuffy suit and tie and mother Miriam wears a soiled housedress. The curtains of the living room are shut, the lampshades are protected with cellophane and the furniture is shielded with fabric covers. A picture of Jerusalem hangs on the wall (1). Arbus stated about her own photography, ‘I do feel I have some slight corner on something about the quality of things. I mean it’s very subtle and a little embarrassing to me, but I really believe there are things which nobody would see unless I photographed them’ (1, 2, 3).

## Epitaph

Appearing after Arbus’ death on a talk show hosted by Richard Lamparski, Carmel produced one of his famous spontaneous poems.

*A long time ago I had a real strange pal,  
A truly strange and wonderful gal.  
In a world that’s growing quickly and seems to be in some  
kind of weird stir,  
Here was a marvelous gal, a photographer.  
Who would suddenly open up her little eyes and mutter,  
And quickly snap her camera shutter.  
Diane Arbus is now not with us anymore,  
And it’s a tragedy that suddenly we have faced a closing door.  
Of a wonderful gal, a talented one,  
Affectionately known as a lovely dear old son of a gun.*

## Discussion

### Photographic art and gigantism

In the authors’ opinion, this is the only photograph of a subject with acromegaly made by a professional artist which is on display at international art galleries and museums. A gelatin silver printing-out-paper photograph dated 1925 and named ‘Fête du Trône – Le Géant Armand’ (the feast of the throne – the giant Armand) by the already mentioned famous French photographer Eugène Atget (1857–1927) showing the theater where the French acromegalic giant Armand Bronner (Le Géant Jurassien; 1890–1927 – claimed height 2.44 m (8 ft.) – realistic height 2.28 m (7 ft. 6 in.)) was performing on stage does not show the giant himself but just the outside of the theater entrance including a side panel with a painting of the giant with a person of short stature and is on display at the MoMa in New York City. A similar gelatin silver printing-out-paper photograph, also dated 1925 and named ‘Fête du Trône – Boutique de Foire’ (the feast of the throne -street fair booth) is also by Eugène Atget and Berenice Abbott and shows a display of two pictures of Armand Bronner and a person of average stature and a subject of short stature named Robert (0.78 m – 2 ft. 7 in.) but not the giant Armand Bronner in person. Interestingly, Diane Arbus was inspired by Eugène Atget and studied with Berenice Abbott. Two pictures of the Peruvian giant Juan de la Cruz Sihuana, appr. 2.13 m (7 ft) were taken by the famous Peruvian photographer Martin Chambi (1891–1973) between 1925 and 1930. One of these pictures shows Juan de la Cruz Sihuana standing next to Chambi’s assistant Victor Mendivil. These pictures are in the collections of the San Francisco Museum of Modern Art (SF MOMA), Grace Hudson Museum in Ukiah (CA, USA) and the Museo de Arte de Lima. Of course, many other excellent photographs of famous acromegalic subjects do exist, even made by highly esteemed photographers, but none of them are exhibited in world leading art museums.

### Declaration of interest

Wouter de Herder is a senior editor of Endocrinology, Diabetes and Metabolism Case Reports. Wouter de Herder was not involved in the review or editorial process for this paper, on which he/she is listed as an author.

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### Patient consent

Every effort was made to contact the next of kin of the deceased patient to obtain consent but was unsuccessful. Permission has been gained from the estate of Diane Arbus for use of the photo.

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### Note added post-publication

The readers are informed that a version of this article published on 5 November 2021 has been corrected in this version. The title has been modified slightly with the inclusion of the phrase 'the Diane Arbus photograph'. Figure 1 was slightly cropped in the earlier version and the complete photograph is published in full in this version. These changes do not alter the scientific content of the article or the interpretation of the results.

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