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## We used to be identical twins! A case report of MEN-1 and gigantism: The identical twin 1 foot taller than his brother

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A 24 year old male presented repeatedly to his GP with rapid growth in height and joint pain but it was a physiotherapist who suggested that he could have late stage gigantism. Upon presentation he had recently grown from 208cm to 216cm tall during a short number of months.

Of note he had prognathism, frontal bossing, macroglossia, broadening of his nose and significant interdental spacing. His mother is 165cm tall, his father is 172cm tall. Interestingly he has an identical twin who is only 185cm tall and wears shoes 6 sizes smaller than the patient. Childhood photos confirm that they are indeed identical twins and previously only close family could tell them apart. At the age of 16 he started to grow taller, and they now look remarkably different from each other.

Biochemical testing revealed an IGF-1 of 698ng/mL (98.7-289) with a growth hormone >40 on OGTT, confirming growth hormone hypersecretion and a diagnosis of gigantism. In addition, he was successfully treated for LH, FSH, TSH, ACTH deficiency with supplementary medication. Genetic testing was confirmatory for MEN-1.

MRI pituitary scan identified a 4.7cm giant pituitary

macroadenoma which was successfully resected. Post-operative recovery was complicated with meningitis and biochemistry on day 2 post-operation showed an IGF-1 of 586 with random GH of 15.8. However, further biochemical assessment will be required as an outpatient.

This case highlights the importance of early identification and referral to specialist services. The patient reports distress that he visited his GP many times without a diagnosis or referral leading to irreversible physical changes.

This case raises several important discussion points including:

- Why has one identical twin developed significant pathology whilst the other remains healthy?
- How do we diagnose such a rare condition at an earlier stage to avoid preventable ongoing harm from excess GH secretion?

### Biography

Caitlin is an IMT3 doctor at Salford Royal Hospital in Manchester. She is in the process of applying for ST4 Endocrinology & Diabetes. She also has a keen interest in medical education after completing an intercalated BSc and organizes the local departmental endocrinology teaching rota.