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Atypical LMNA Mutation in EXON 11 Associated with a Milder Clinical Outcome in Dunnigan-Type Familial Partial Lipodystrophy

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Dunnigan-type familial partial lipodystrophy (FPLD2) is a rare genetic disease associated with loss of subcutaneous adipose tissue and accompanying metabolic involvement such as diabetes, hyperlipidemia, and hepatosteatosis. We aimed to present a rare family with FPLD2 caused by an atypical Lamin A/C gene (LMNA) mutation.

The proband of this family was a 43-year-old female patient who was diagnosed with FPLD2 caused by a heterozygous missense mutation, R582H (c.1745G→A) in exon 11. Here, we report her prospective 8-year follow-up as regard to metabolic complications and end-organ abnormalities.

Due to adipose tissue dysfunction, she developed type 2 diabetes, hypertriglyceridemia, and hepatosteatosis at her thirties. In contrast to many patients with typical FPLD2, her diabetes was well regulated by metformin monotherapy. Lifestyle management, dietary modifications, and fenofibrate monotherapy successfully treated the hypertriglyceridemia. No complication of diabetes has developed. Cardiac and neurological regular assessments were normal. Her father was also diagnosed with FPLD2 caused by the same point mutation. Similarly, his diabetes and hypertriglyceridemia could be easily managed by lifestyle modifications, metformin, and fenofibrate and no end-organ complication was observed.

LMNA undergoes alternative splicing to produce two nuclear laminar proteins - lamin A and C. Multiple missense mutations associated with FPLD2, most of which are located in exon 8 at the codon position 482, have been reported. The missense mutation in our patient was also associated with FPLD2, however, the clinical reflection was somehow milder. This could be explained by the fact that exon 11 mutation affects only lamin A, unlike exon 8 mutation which affects both lamin A and C proteins.

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A Novel Mutation in *AMHR2* Gene in Two Siblings with Persistent Müllerian Duct Syndrome

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Persistent Müllerian duct syndrome (PMDS) is a rare form of male 46,XY disorder of sex development characterized by failure of Müllerian duct to regress in a male fetus during embryonic development. Approximately 45% of cases with PMDS are due to AMH deficiency (type 1), while 40% of cases are due to receptor defects (type 2). We report a novel mutation in *AMHR2* gene in two siblings who presented with bilateral undescended testis.

A 4-year-old boy presented with bilateral undescended testis. At physical examination, the right testis was palpated in the inguinal canal, while the left testis could not be palpated. External genitalia were phenotypically normal male. Ultrasonography revealed absence of left testis and atrophy of right testis. Testosterone response to β-HCG stimulation test was positive. Laparoscopy demonstrated the right testis in the inguinal canal, the left testis behind the urinary bladder, in addition to uterus behind the urinary bladder. His 2-year-old brother also presented with right undescended testis. At physical examination, the right testis could not be palpated and the left testis was palpated in the inguinal canal. External genitalia was phenotypically normal. During surgery, rudimentary uterus was identified between intraabdominal testes. Presence of Müllerian duct structures in cases with karyotype 46,XY confirmed the diagnosis of PMDS. There was second cousin marriage between parents of cases. Homozygous p.V458L(c.1372G>T) mutation in *AMHR2* gene was found.

We report a novel mutation in *AMHR2* gene as a cause of PMDS. PMDS is a rare condition; however, it must be considered in the differential diagnosis of cryptorchidism with normal male genitalia.