

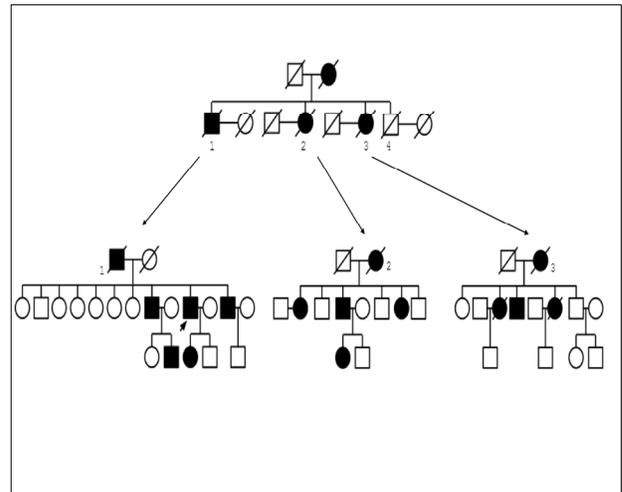


신진홍
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Genetic Muscle Disease

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PATTERN RECOGNITION | A family with distinguishing features



GESTALT

- Age of onset
- Progression
- Inheritance pattern
- Frequency
- Test availability

Asymmetry

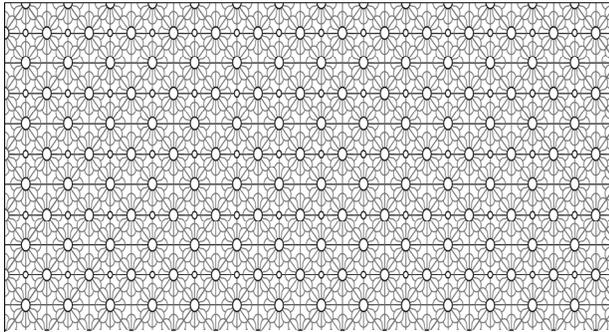
- FSHD, DMD carrier
- McArdle, LOPD
- DYSF, CAPN3, CAV3
- Myositis, MG

Scapular winging

- FSHD, EDMD
- CAPN3, SGCB, FKRP, POMP2, ACTA1

Facial weakness w/o ophthalmoplegia

- FSHD, DM1
- ACTA1, MYH7
- FHL1, CAPN3



MYOPATHY PLUS

A newborn with high CK, weakness and brain malformation

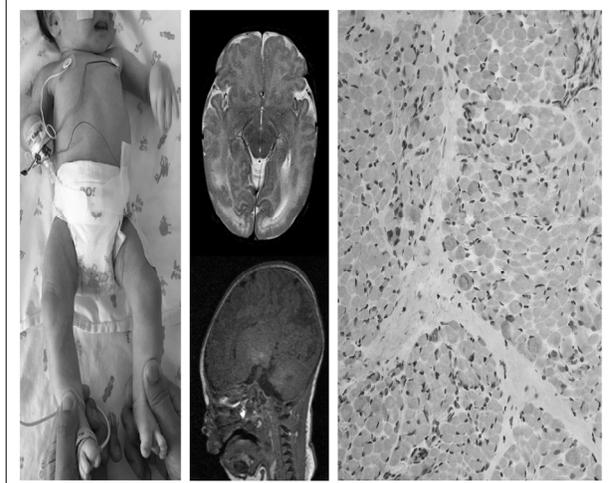
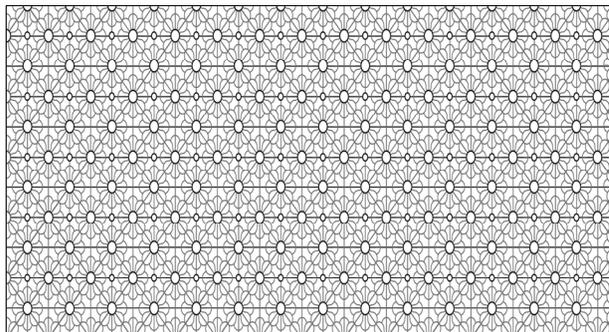


TABLE 12.4 Genetically Identified Forms of Congenital Muscular Dystrophy (CMD)

Common Disease Name	Abbreviation	Gene Symbol	Gene Locus	Protein	Protein Type
"Merosin deficient" CMD	MDC1A	LAMA2	6q	Laminin α2	Extracellular matrix
Ullrich CMD	UCMD	COL6A1	21q22	Collagen VI	Extracellular matrix
	UCMD	COL6A2	21q22	Collagen VI	Extracellular matrix
	UCMD	COL6A3	2q37	Collagen VI	Extracellular matrix
Integrin α7 deficiency		ITGA7	12q13	Integrin α7	Transmembrane (plasma membrane)
Fukuyama CMD	FCMD (MDDGA4)*	FKTN**	9q31-q33	Fukutin	Possible substrate for glycosyltransferase
Muscle-eye-brain disease	MEB (MDDGA3)	POMGN7†	1p3	O-mannose β-1,2-N-acetyl-glucosaminyl transferase	Glycosyltransferase
Walker-Warburg syndrome	WWS				
	(MDDGA1)	POMT1	9q34	Protein-O-mannose transferases 1 & 2	Glycosyltransferase
	(MDDGA2)	POMT2	14q24.3	?	?
	(MDDGA7)	ISPD	7p21	Isoprenoid synthase containing domain	?
-	MDC1B	?	1q42	?	?
-	MDC1C (MDDGA5)	FKRP	19q1	Fukutin-related protein	Possible phosphosugar transferase
-	MDC1D (MDDGA6)	LARGE	22q12	LARGE	Possible glycosyltransferase
Rigid spine syndrome	RSMD1	SEPN1	1q36	Selenoprotein N1	Glycoprotein of endoplasmic reticulum



TREATMENT AVAILABILITY

Man with progressive proximal weakness and respiratory failure

M41 PROGRESSIVE ORTHOPNEA FOR 1 MO

- weight loss >10 kg for 2 years
- respiratory weakness and difficulty climbing stairs for 2 months
- proximal weakness 4 to 4+
- EMG myotonia (+), clinical myotonia (-)
- FVC 1.39 L
- An elder sister with recurrent respiratory failure, unknown cause

TREATMENT AVAILABLE BY ANY MEANS

- Inflammatory myopathy
- Genetic myopathy
 - Muscular dystrophy
 - Metabolic myopathy
- NMJ disorder
- Motor neuron disorder