

Průběh nervosvalových komplikací u pacientů v intenzivní péči

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| Histopathologic diagnosis | Symbol | No | EMG diagnosis No |
|----------------------------------|---------------|-----------|-------------------------|
| Neurogenic lesion | N | 2 | 18 |
| Simple (cachectic) myopathy | Ms | 15 | 9 |
| Necrotizing myopathy | Mn | | |
| Myosin loss myopathy | Mm | | |
| Myopathy and neuropathy | M(N) | 19 | 9 |
| Fibre type 2 atrophy | Atr2 | | |
| Minimal change myopathy | Minim | 6 | |
| Normal finding | Norm | 1 | 0 |
| Not done | ND | 0 | 7 |
| Σ | | 43 | 43 |

| Patient No | Day | Age | Clinical diagnosis | Sepsis | MO F | CK | Histopat | Neurol - E M G | Ardu an | HCA | DEX |
|------------|-----|-----|----------------------------------|--------|------|-------|----------|----------------|---------|-----|-----|
| 1 | 7 | 30 | Bronchopneumonia | yes | yes | 15,8 | Minim | ND | 0 | 0 | 0 |
| 2 | 8 | 43 | Aortic dissection,rhabdomyolysis | yes | yes | 52,0 | Norm | ND | 73 | 300 | 0 |
| 3 seq | 12 | 66 | Aortic valve replacement | yes | yes | | Atr2 | PNP + myopathy | 28 | 0 | 124 |
| 4 seq | 13 | 67 | Myocardial revascularization | yes | yes | 546,7 | Ms(N) | PNP + myopathy | 134 | 0 | 0 |
| 5 | 14 | 73 | Revascularization of myocardium | yes | yes | 4,1 | Minim | Axonal PNP | 26 | 0 | 0 |
| 6 | 14 | 72 | Myocardial revascularization | yes | yes | 8,8 | Minim | Myopathy | 8 | 0 | 56 |
| 7 | 19 | 54 | GI bleeding | yes | yes | 6,0 | N | ND | 0 | 0 | 0 |
| 8 | 20 | 65 | Urosepsis | yes | yes | 17,0 | Ms | ND | 0 | 100 | 0 |
| 9 | 21 | 71 | Aortic dissection | yes | yes | 15,1 | Ms(N) | Axonal PNP | 18 | 200 | 140 |
| 10 seq | 22 | 49 | Malignant lymphoma | yes | yes | 2,4 | Ms | Myopathy | 0 | ### | 0 |
| 11 | 23 | 20 | Intraabdominal sepsis | yes | yes | 8,9 | Ms(N) | Axonal PNP | 4 | ### | 0 |
| 12 | 25 | 47 | Atrial septal defect | yes | yes | 1,3 | Ms Atr2 | Myopathy | 20 | 200 | 0 |
| 13 | 25 | 69 | Revascularization of myocardium | yes | yes | 2,1 | Ms Atr2 | Axonal PNP | 22 | 600 | 20 |
| 14 | 25 | 77 | Peritonitis | yes | yes | 74,6 | Minim | ND | 0 | 0 | 0 |
| 15 | 26 | 54 | Cholangitis | yes | yes | 3,5 | Ms | Axonal PNP | 20 | 0 | 32 |
| 16 | 26 | 64 | Myocardial infarction | yes | yes | 246,7 | Ms Mm | Axonal PNP | 0 | 0 | 0 |
| 17 | 30 | 64 | Intracerebral haematoma | yes | yes | 2,8 | Ms N | PNP + myopathy | 0 | 0 | 0 |
| 18 | 31 | 59 | Brain contusion | yes | yes | 2,8 | Ms | Myopathy | 260 | 0 | 320 |
| 19 | 31 | 78 | Brain ischemia | yes | yes | 3,1 | Ms(N) | PNP + myopathy | 0 | 0 | 0 |
| 20 | 31 | 72 | Aortic valve replacement | yes | yes | 195,6 | Mn | Axonal PNP | 40 | 300 | 0 |

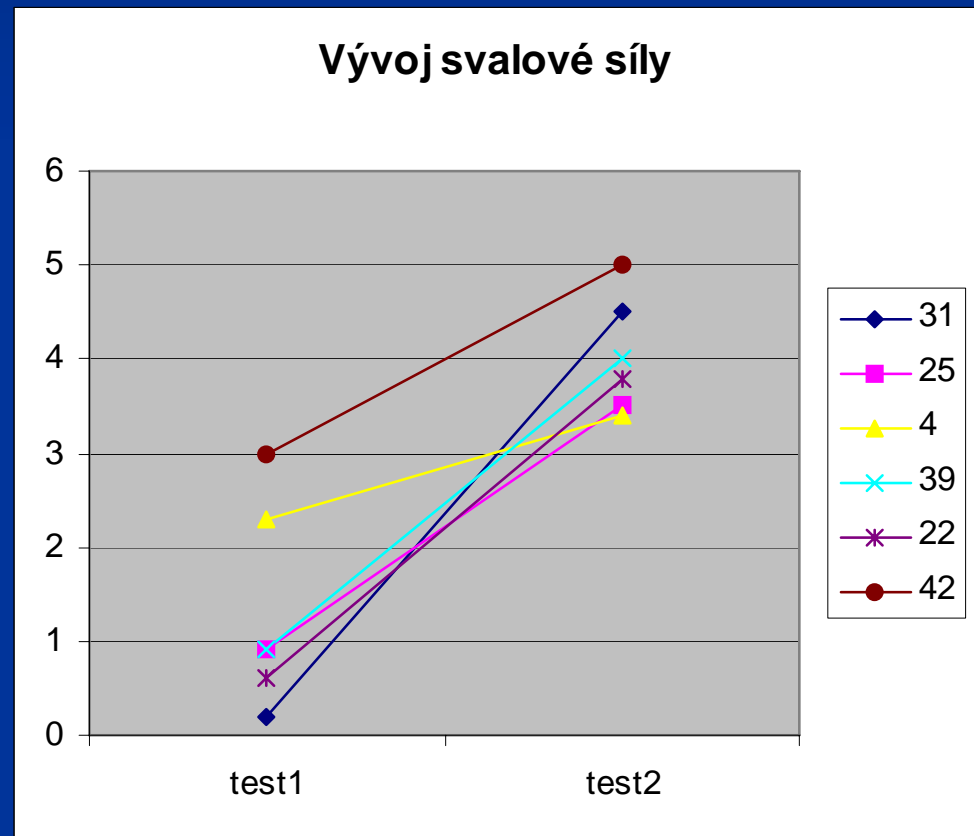
| | | | | | | | | | | | |
|---------------|-----------|----|--------------------------|-----|-----|-----------|----------------|-----------------------|-----|-----|----------|
| 21 | 31 | 48 | Acute pancreatitis | yes | yes | 4,8 | Ms(N) | Axonal PNP | 0 | 0 | 0 |
| 22 seq | 33 | 51 | Pulmonary embolism | yes | yes | 64,0 | Mn(N) | Axonal PNP | 0 | 0 | 0 |
| 23 | 33 | 69 | Brain ischemia | yes | yes | 3,5 | Ms | Myopathy | 0 | 0 | 0 |
| 24 | 35 | 35 | Meningoencephalitis | yes | yes | 0,4 | Ms N | Myopathy | 224 | 0 | 128 0 |
| 25 seq | 36 | 43 | Mediastinitis | yes | yes | 96,1 | Mn Atr2 | PNP + myopathy | 12 | 0 | 0 |
| 26 | 36 | 55 | Pulmonary abscess | yes | yes | 43,9 | Mn | Myopathy | 16 | ns | ns |
| 27 | 36 | 67 | Ileus - peritonitis | yes | yes | 9,8 | Ms Atr2 | Axonal PNP | 2 | 0 | 0 |
| 28 | 37 | 62 | Septic shock | yes | yes | 20,1 | Ms(N) | Axonal PNP | 68 | 0 | 24 |
| 29 seq | 39 | 70 | Pancreatitis | yes | yes | 1,3 | Minimal | Axonal PNP | 0 | 300 | 0 |
| 30 | 41 | 72 | Bacterial pericarditis | yes | yes | 1,2 | Mn Mm | ND | 16 | 0 | 0 |
| 31seq | 43 | 45 | Aortic valve replacement | yes | yes | 404, 3 | Mn | Axonal PNP | 90 | 200 | 96 |
| 32 | 45 | 22 | Basilar thrombosis | yes | yes | 30,5 | Minim | ND | 0 | 0 | 0 |
| 33 | 48 | 78 | Acute pancreatitis | yes | yes | 1,5 | Ms(N) | Axonal PNP | 0 | 0 | 0 |
| 34 | 51 | 66 | Cardiac arrest | yes | yes | 5,1 | Ms(N) | Myopathy | 16 | 0 | 0 |
| 35 | 51 | 51 | Subarachnoid haemorrhage | yes | yes | 2,6 | Ms | Axonal PNP | 216 | 0 | 840 |
| 36 | 55 | 70 | Acute pancreatitis | yes | yes | 0,2 | Mm | Axonal PNP | 0 | 0 | 0 |
| 37 | 57 | 57 | Intracerebral haematoma | yes | yes | 42,8 | Ms | Myopathy | 0 | 0 | 0 |
| 38 | 57 | 54 | Acute pancreatitis | yes | yes | 13,6 | Ms(N) | PNP + myopathy | 32 | | 92 |
| 39 seq | 58 | 62 | Aortic valve replacement | yes | yes | 2,5 | Ms(N) | PNP + myopathy | 24 | 100 | 180 |
| 40 | 62 | 30 | Brain ischemia | yes | yes | 10,1 | N | PNP + myopathy | 0 | 0 | 0 |
| 41 | 62 | 62 | Aortic valve replacement | yes | yes | 4,0 | Ms | PNP + myopathy | 12 | 0 | 0 |
| 42 seq | 65 | 44 | Acute pancreatitis | yes | yes | 24,6 | Ms | Axonal PNP | 0 | 0 | 0 |
| 43 | 77 | 47 | GI bleeding | yes | yes | 1,2 | Ms(N) | Axonal PNP | 88 | 0 | 0 |

| Patient No | Clinical background | Neurological finding (1) | EMG (1) | Biopsy (1) | Interval | Neurological finding (2) | EMG (2) | Biopsy (2) |
|------------|--------------------------|--------------------------|--------------|----------------------|----------|------------------------------|--------------|-----------------------------|
| 3 | Aortic valve replacement | quadraplegia | Mixed lesion | Atr 2 | 5 weeks | Marked improvement | Mixed lesion | Atr 2 |
| 10 | Non Hodgkin ML, chemo | MOF, sepsis quadraplegia | Myopathy | Mild simple myopathy | 1 week | Rhabdomyolysis, quadraplegia | Myopathy | Severe necrotizing myopathy |

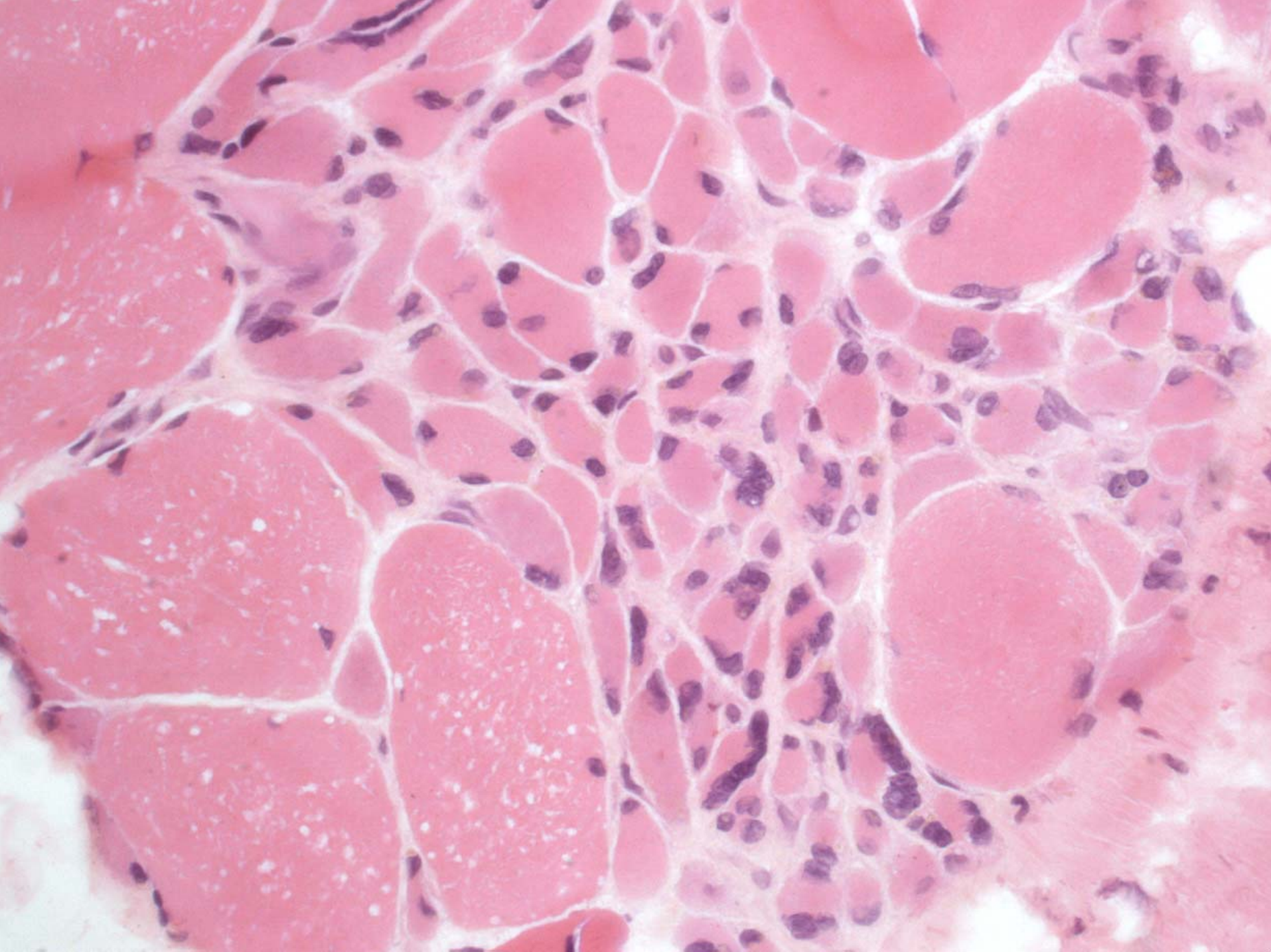
- Σ 1 --- bioptický nález se v průběhu onemocnění mění a reflektuje aktuální stav pacienta v intenzivní péči → nutnost správného načasování doby vyšetření

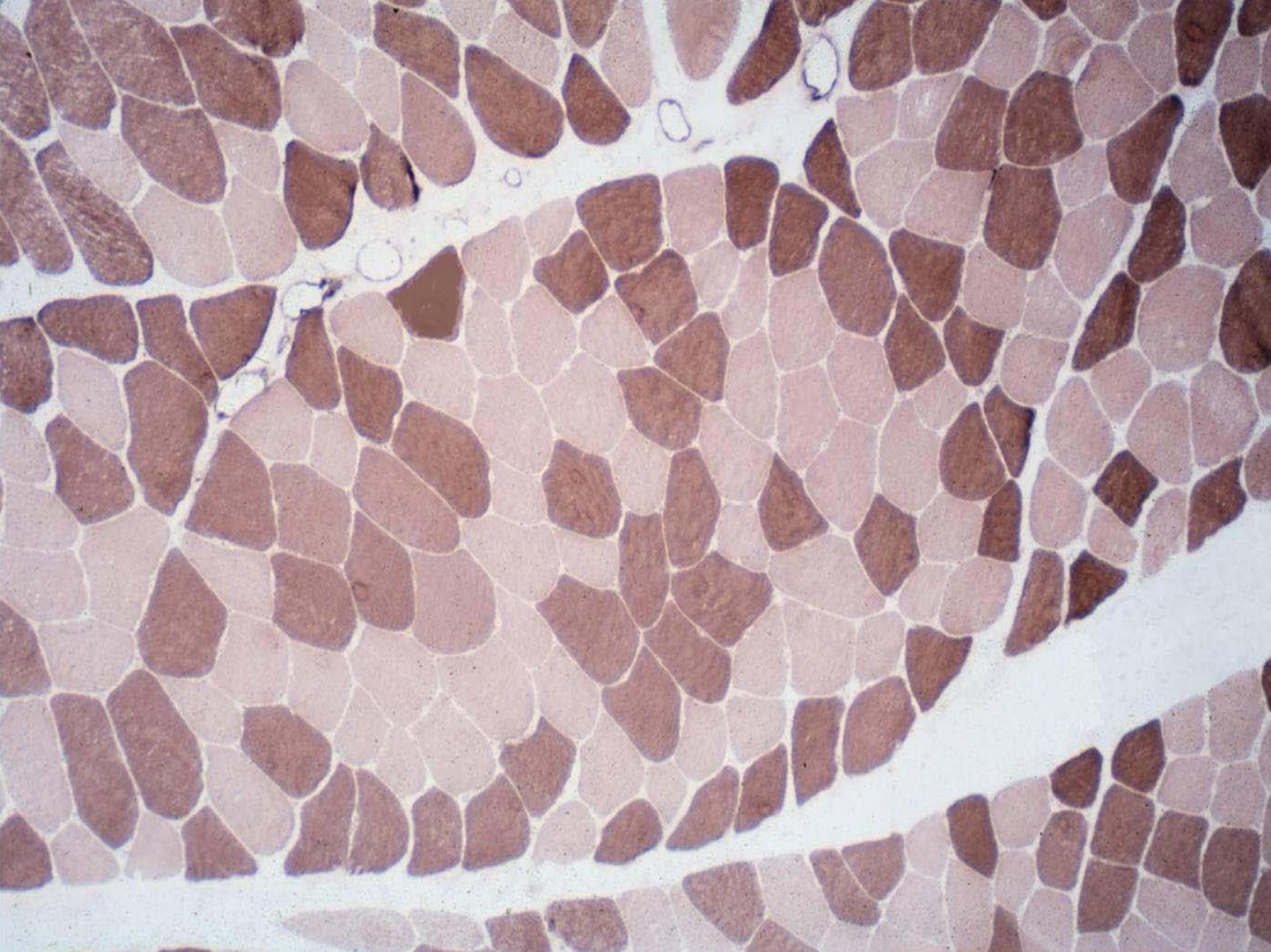
| Patient No | Clinical background | Neurological finding (1) | EMG (1) | Biopsy (1) | Int. | Neurological finding (2) | EMG (2) | Biopsy (2) |
|------------|--|-------------------------------|------------------------------|--------------------------------|------|--|-----------------------|--------------------------------|
| 4 | Ao-coronary bypass, sepsis, rhabdomyolysis | Quadruparesis MRCav 2,3 | Axonal PNP | Myopathy and neuropathy | 31 m | Ambulatory with 1 stick, acral dysesthesia MRCav 3,4 | Axonal PNP | Neuropathy |
| 22 | Pulmonary embolism, rhabdomyolysis, | Quadruplegia MRCav 0,6 | Axonal PNP | Myopathy and neuropathy | 20 m | Fully ambulatory with peroneal paresis, acral paresthesia MRCav 3,8 | Axonal PNP (improved) | Normal |
| 25 | Mediastinitis, sepsis, MOF | Quadruparesis MRCav 0,9 | Neuromyopathy | Myopathy | 20 m | Fully ambulatory with peroneal paresis, acral paresthesia MRCav 3,5 | Axonal PNP (improved) | Minimal change myopathy |
| 29 | Biliary pancreatitis, sepsis, MOF | Quadruparesis MRC not done | Axonal PNP | Myopathy and neuropathy | 21 m | Ambulatory with 2 sticks MRC not done | Axonal PNP (improved) | Neuropathy, myosin loss |
| 31 | Aortic valve replacement, sepsis, MOF, DIC | Quadruplegia MRCav 0,2 | Axonal and demyelinating PNP | Myopathy | 29 m | Fully ambulatory with peroneal paresis, acral paresthesia MRCav 4,5 | Persisting axonal PNP | Normal |
| 39 | Aortic valve replacement, MOF, sepsis, | Quadruparesis MRCav 0,9 | Axonal PNP, myopathy | Myopathy and neuropathy | 20 m | Ambulatory with peroneal paresis MRCav 4,0 | Persisting axonal PNP | Minimal change myopathy-normal |
| 42 | Acute pancreatitis, sepsis, MOF | Muscle weakness MRC av 3,0 | Axonal PNP | Myopathy, fibre type 2 atrophy | 11 m | Normal MRC av 5,0 | Persisting axonal PNP | Normal |

| Patient | test1 | test2 |
|---------|-------|-------|
| 31 | 0,2 | 4,5 |
| 25 | 0,9 | 3,5 |
| 4 | 2,3 | 3,4 |
| 39 | 0,9 | 4 |
| 22 | 0,6 | 3,8 |
| 42 | 3 | 5 |



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| 42 | Acute pancreatitis, sepsis, MOF | Muscle weakness MRC av 3,0 | Axonal PNP | Myopathy, fibre type 2 atrophy | 11 m | Normal MRC av 5,0 | Persisting axonal PNP | Normal |





- Σ : myogenní složka ICM je časově omezená

- **Σ: EMG známky přetrvávající či residuální axonální PNP - popsány rovněž ve dvou dosavadních sděleních**
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- Hund EF, Fogel W, Krieger D, DeGeorgia M, Hacke W. Critical illness polyneuropathy: clinical findings and outcomes of a frequent cause of neuromuscular weaning failure. Crit Care Med 1996; 24: 1996
- Fletcher SN, Kemmedy DD, Ghosh IR, et al. Persistent neuromuscular and neurophysiologic abnormalities in long-term survivors of prolonged critical illness. Crit Care Med 2003; 31: 1012-1016
- **o déledobém vývoji neuropatie kriticky nemocných - nereflektují dostatečně klinický stav pacienta. V tomto směru stojí bioptický nález námi vyšetřených pacientů blíže klinickému obrazu**