MITO 101 – Pain

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Key Points:

- Pain alone is not a common complaint in mitochondrial disease reported in the literature. Rather, patients complain of migraines or headaches, muscle discomfort, gastrointestinal discomfort, or of dysaesthesia in the distal limbs when neuropathy is present. However, some patients with mitochondrial disease suffer from pain syndromes.
- Underlying non-mitochondrial causes of pain need to be carefully excluded.
- Pain may go undetected in patients with severe neurological deficits or cognitive impairment.
- Patient care includes addressing any underlying problem, and adequately treating pain to preserve quality of life.

Clinical Investigation of pain in mitochondrial disease:

- A careful history and physical exam are important to detect any underlying cause that may contribute to the painful condition.
- Ancillary studies may be needed including, for example, gastrointestinal studies for abdominal discomfort, or nerve conduction studies for limb pain.

Management of Pain in Mitochondrial Disease

- After addressing the underlying factors contributing to pain, pain associated with mitochondrial disease is treated similarly to pain in other conditions, starting with non-opioid analgesics.
- When non-opioid analgesics are insufficient, patients may benefit from referral to a pain management center specializing in chronic pain, while also being followed by a mitochondrial expert.
- Migraine headaches may respond to one of the triptans acutely and may warrant prophylactic treatment if they occur more than twice each month.
- Muscle discomfort can be improved with lifestyle modifications aimed at avoiding the trigger situations while engaging in a program of gentle, brief, and regular physical activity to avoid deconditioning. Stretching exercises can also help improve muscle discomfort.
- Some patients feel that hydration, in particular with electrolyte-rich “sports drinks” can alleviate muscle pain.
- Some patients find that they benefit from “energy conservation” techniques. This means that one tries to avoid excessive exertion so that there is enough energy left for an enjoyable activity.
- Some patients find that they experience pain associated with over-exertion under unfavorable conditions, such as hot and humid weather, cold weather, illness, fever or stress.
• Maintaining regular activity to the extent possible can prevent pain that is often associated with inactivity, such as joint pain or muscle discomfort.

• Neuropathic pain often responds to pharmacotherapy, including antiepileptic medications (e.g. gabapentine or topiramate), antidepressants (e.g. tricyclic antidepressants or SSRIs), or other medications such as tramadol.


