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NEUROLOGICAL
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FÉDÉRATION
DES SCIENCES
NEUROLOGIQUES
DU CANADA

SYSTEMIC DISEASES
COMPLICATING PERIPHERAL
NEUROPATHIES – WHAT NOT TO
MISS

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Disclosures

Nil



Learning objectives: To understand Systemic disorders with associated peripheral neuropathies

Covering

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graph TD; A[Covering] --> B[Critical illness polyneuropathy, Chronic renal failure, Endocrine disorders, Vitamin deficiency states, Malignancies and reticuloses]; A --> C[Neurofibromatosis, Connective tissue disorders, Enteropathy, Sarcoidosis.];
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- Practical “common” conditions
 - **Mainly systemic diseases**
- Not covering infections, genetics specifically or neurometabolic / mitochondrial diseases

- Critical illness polyneuropathy
- Chronic renal failure
- Endocrine disorders
- Vitamin deficiency states
- Malignancies and reticuloses

- Neurofibromatosis,
- Connective tissue disorders
- Enteropathy
- Sarcoidosis.

Key points: What is the relevance?

- ❖ Children may **present with neuropathic symptoms** as the first indicator of an underlying systemic condition
 - ❖ Need to consider this
 - ❖ Similarly, some systemic conditions may be complicated by **co-morbid peripheral neuropathies**
 - ❖ surveillance for which is indicated.
 - ❖ Some disorders need **pre-symptomatic neuropathy screening**, while in others there is no benefit from early detection of neuropathy.
- ❖ In children with **idiopathic peripheral neuropathies**, systemic disorders such as celiac disease should be actively excluded.
 - ❖ While management is predominantly focused on symptomatic care through pain control and rehabilitation, **some neuropathies improve with effective control of the underlying aetiology** and in a small proportion a more targeted approach is possible.

Conclusion

- ❖ Some neuropathies associated with systemic disease can have a **profound clinical impact** and compromise
 - ❖ e.g. CIP and autonomic dysfunction with diabetes mellitus-.
- ❖ Screening for evidence of nerve dysfunction can be an **indicator of chronic poor disease control**
 - ❖ E.g. chronic renal failure
- ❖ Peripheral neuropathy may be the presenting feature warranting **active exclusion** of the systemic condition.
 - ❖ E.g. celiac disease,
- ❖ Early recognition and symptomatic care of neuropathy is important for **mobility and pain control**.
- ❖ In many conditions, neuropathy will improve in tandem with the **optimal management** of the underlying disease.
- ❖ Peripheral neuropathies can be associated with a diverse range of medical conditions and unless **actively considered** may not be recognized and thus inadequately managed.



Key references

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