SOHC

SWISS ONCOLOGY & HEMATOLOGY CONGRESS

CLINICAL HEMATO-ONCOLOGY

SYSTEMIC AL-AMYLOIDOSIS DIAGNOSED VIA HISTOPATHOLOGICAL SCREENING IN PATIENTS UNDERGOING CARPAL TUNNEL SURGERY: A CASE REPORT

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Introduction

- The two most common systemic types of amyloidosis are immunoglobulin light chain (AL) and transthyretin (ATTR) amyloidosis, affecting predominately the heart and soft tissues
- AL- and ATTR-amyloidosis are recognized causes of carpal tunnel syndrome (CTS), but the association is less common in AL-amyloidosis
- It is estimated that amyloid deposits are present in at least 10 % of tenosynovial biopsies
- Detection of ATTR-amyloid in CTS signifies an increased risk to develop cardiac amyloidosis within 10 years
- Early diagnosis is crucial to initiate disease-directed treatment, as prognosis is poor in later stages

Methods

- We report a case of a patient with lambda light chain multiple myeloma and systemic AL-amyloidosis identified through screening after CTS-surgery

Results

- AL-amyloidosis was diagnosed in a tenosynovial biopsy of a 83-year old man following CTS-surgery (Fig. 1 A-C)
- FDG-PET/CT: metabolically active lesion in L5 vertebral body, extending to prevertebral space

Table 1: Laboratory values at initial diagnosis and after 4 months

Value	27.06.2025	21.10.2025	Reference
Hemoglobin	115 g/l	101 g/l	139-165 g/l
Kreatinin	135 µmol/l	131 µmol/l	62-106 µmol/l
NT-pro-BNP	6664 ng/l	2164 ng/l	<300 ng/l
Troponin-T	45 ng/l	-	<14 ng/l
Calcium	2.33 mmol/l	2.32 mmol/l	2.10-2.55 mmol/l
FLC lambda	1010 mg/l	56.1 mg/l	8.3-27.0 mg/l
Proteinuria	505 mg/d, BJ+	86 mg/d, BJ-	<300 mg/d

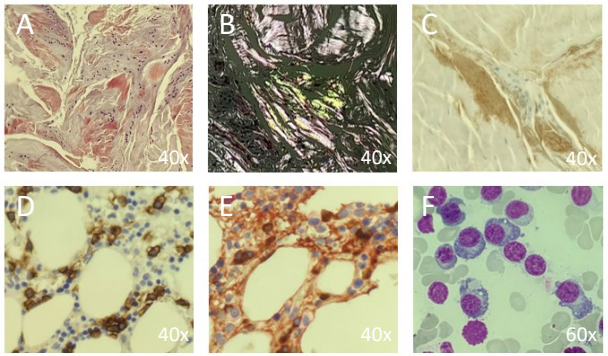

Figure 1: Tenosynovial biopsy: A congo red, B birefringent, C IHC for AL amyloid. Bone marrow biopsy: D IHC CD38, E IHC kappa (red), lambda (brown), F cytomorphology (Giemsa)

- BM-biopsy: 40% clonal plasma cells with lambda light chain restriction (Fig. 1 D-F) and aberrant phenotype (CD27+, CD56+, CD117+, CD19-)
- TTE: reduced global longitudinal strain with apical sparing pattern
- Final diagnosis: systemic AL-amyloidosis with soft tissue, neurological, cardiac and renal involvement secondary to light chain multiple myeloma
- Treatment: Dara-CyBorD according to the ANDROMEDA protocol + bisphosphonate

Conclusions

- Screening for amyloid in tenosynovial biopsies after CTS-surgery offers an opportunity for the early detection of ATTR- but also AL-amyloidosis (Fig. 2)
- Immunohistochemical subtyping of amyloid enables precise amyloid differentiation with important therapeutic implications
- Assessment of systemic involvement is particularly critical, especially in cases of AL-amyloidosis

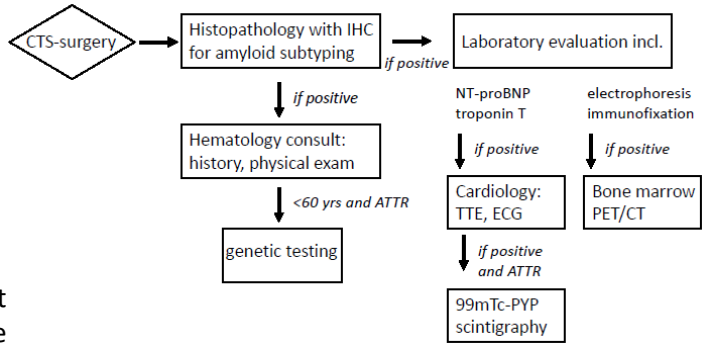

Figure 2: KSW Screening algorithm after CTS surgery

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