

Akilles tendinopati

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Basisoplysninger

Definition:

- Kronisk inflammation i akillessenen, insertionen og dens seneskede
- Opstår typisk når patienten negligerer symptomerne ved en akut peritendinit eller mikrorupturer med tendinit, og der herved opstår degenerative forandringer i senen (tendinose)
- Opstår også som aldersrelateret degenerativ forandring

Forekomst:

- Lidelsen ses først og fremmest hos motionister og hos idrætsudøvere

Ætiologi og patogenese

- Langvarig uvant belastning giver små mikrorupturer i kollagenfibrene, og der opstår reaktiv inflammation, granulationsvæv og endelig fibrose
- Opstår typisk efter ændringer i aktivitetsniveau, brug af forkert fodtøj, træning på hårdt skridfast underlag, koldt klima
- I nogle tilfælde påvises patoanatomiske forandringer i det omgivende væv uden, at senen er væsentligt afficeret
- Ved visse kroniske gener er der sjældent inflammatoriske forandringer i senen, men fibrosering i det peritendinøse væv

Ætiologi og patogenese

Disponerende faktorer:



Høj alder er associeret med svagere kollagent bindevæv, som disponerer for ruptur



Proneret fod, platfodethed

Overpronation er en vigtig årsag til kroniske smerter i
akillesenen

Øget belastning på mediale fibre med mikrorupturer eller
kronisk irritation

Diagnose

Diagnostiske kriterier:

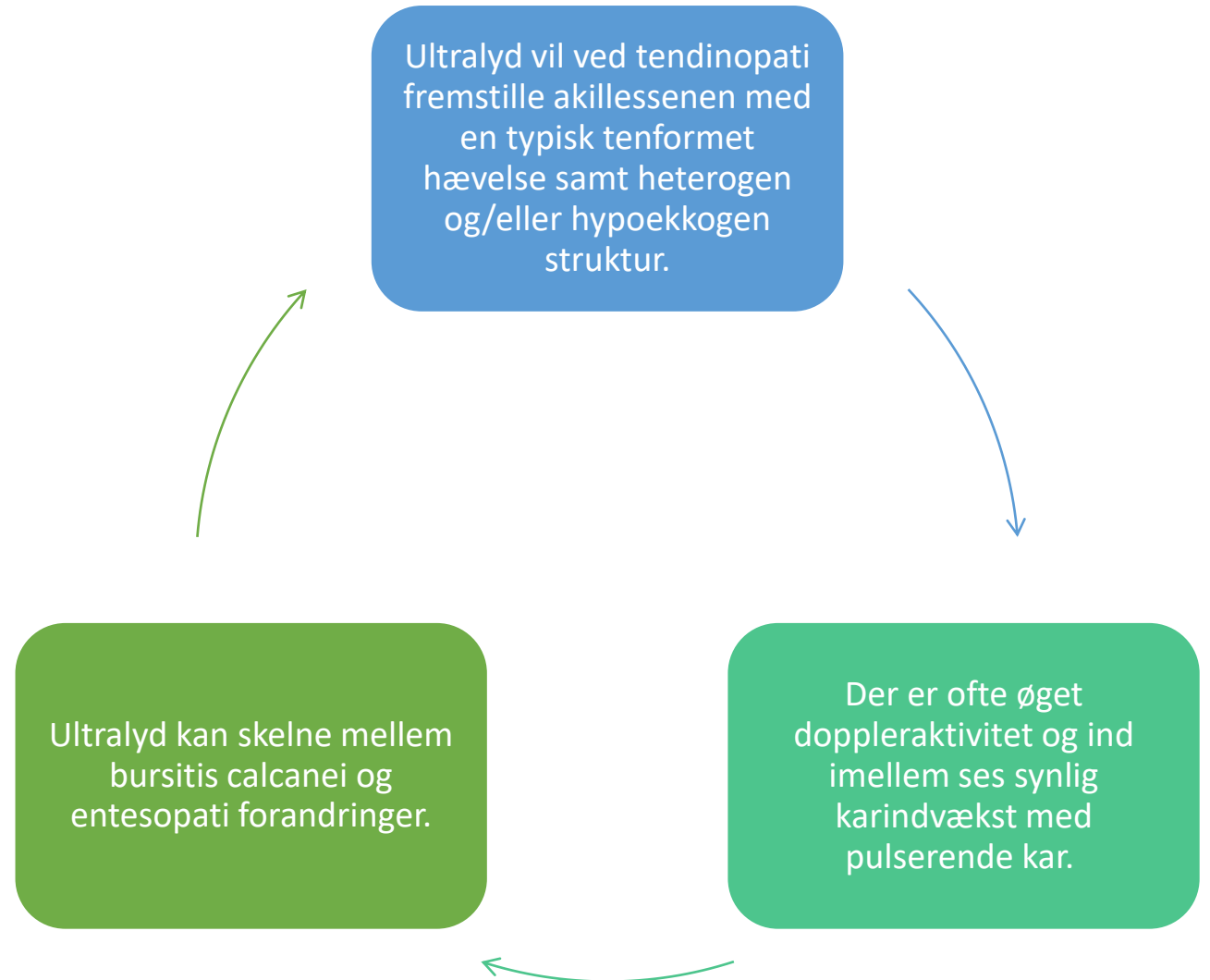
- Smerter og hævelse bag hælen og op over akillessenen under gang eller løb
- Positiv test ved isometrisk plantarfleksion
- Palpationsømhed sv.t. senen og/eller senehæftet på os calcaneus

Differentialdiagnoser:

- Akillesruptur!
- Haglunds hæl
- Retrocalcaneal bursit
- Plantaris friktionssyndrom
- Ved børn – Severs hælsmerter syndrom

Ultralydsscanning og MR:

Giver en dynamisk vurdering af senen og fastslår graden af fortykkelse og evt. mikrorupturer.



Topical Review

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Tendon pain – what are the mechanisms behind it?

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Abstract

Objectives: Management of chronic tendon pain is difficult and controversial. This is due to poor knowledge of the underlying pathophysiology of chronic tendon pain, primarily known as tendinitis but now termed tendinopathy. The objective of this topical review was to synthesize evolving information of mechanisms in tendon pain, using a comprehensive search of the available literature on this topic.

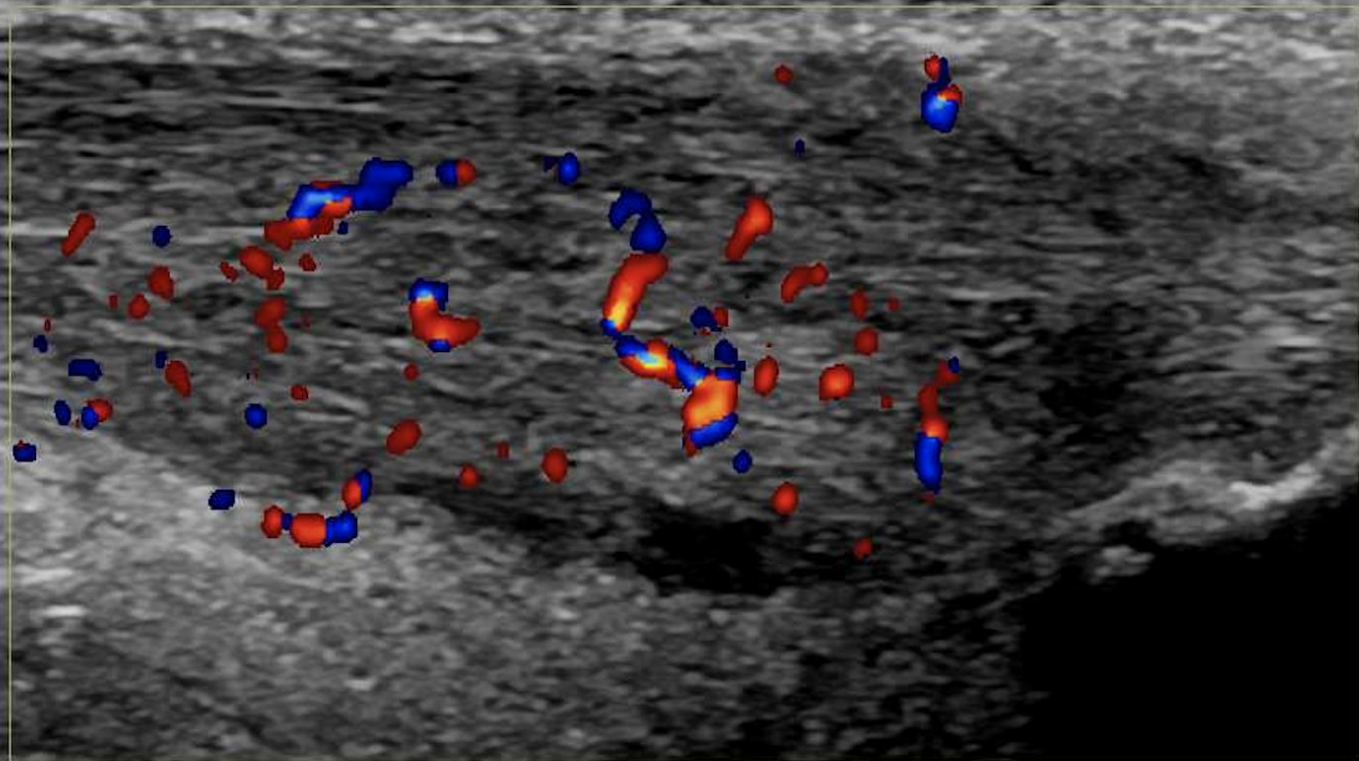
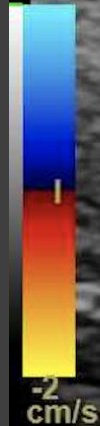
Content: This review found no correlations between tendon degeneration, collagen separation or neovascularization and chronic tendon pain. The synthesis demonstrated that

glutamate and substance p as well as up-regulated expression and excitability of pain receptors, such as the glutamate receptor NMDAR1 and the SP receptor NK1, found on ingrown nerves and immune cells. Increasing evidence indicates that mast cells serve as an important link between the peripheral nervous system and the immune systems resulting in so called neurogenic inflammation.

Summary: Chronic painful tendons exhibit (1) protracted ingrowth of sensory nerves (2) elevated pain mediator levels and (3) up-regulated expression and excitability of pain receptors, participating in (4) neuro-immune pathways involved in pain regulation. Current treatments that entail the highest scientific evidence to mitigate chronic tendon pain include eccentric exercises and extracorporeal shockwave, which both target peripheral neoinnervation aiming at nerve regeneration.

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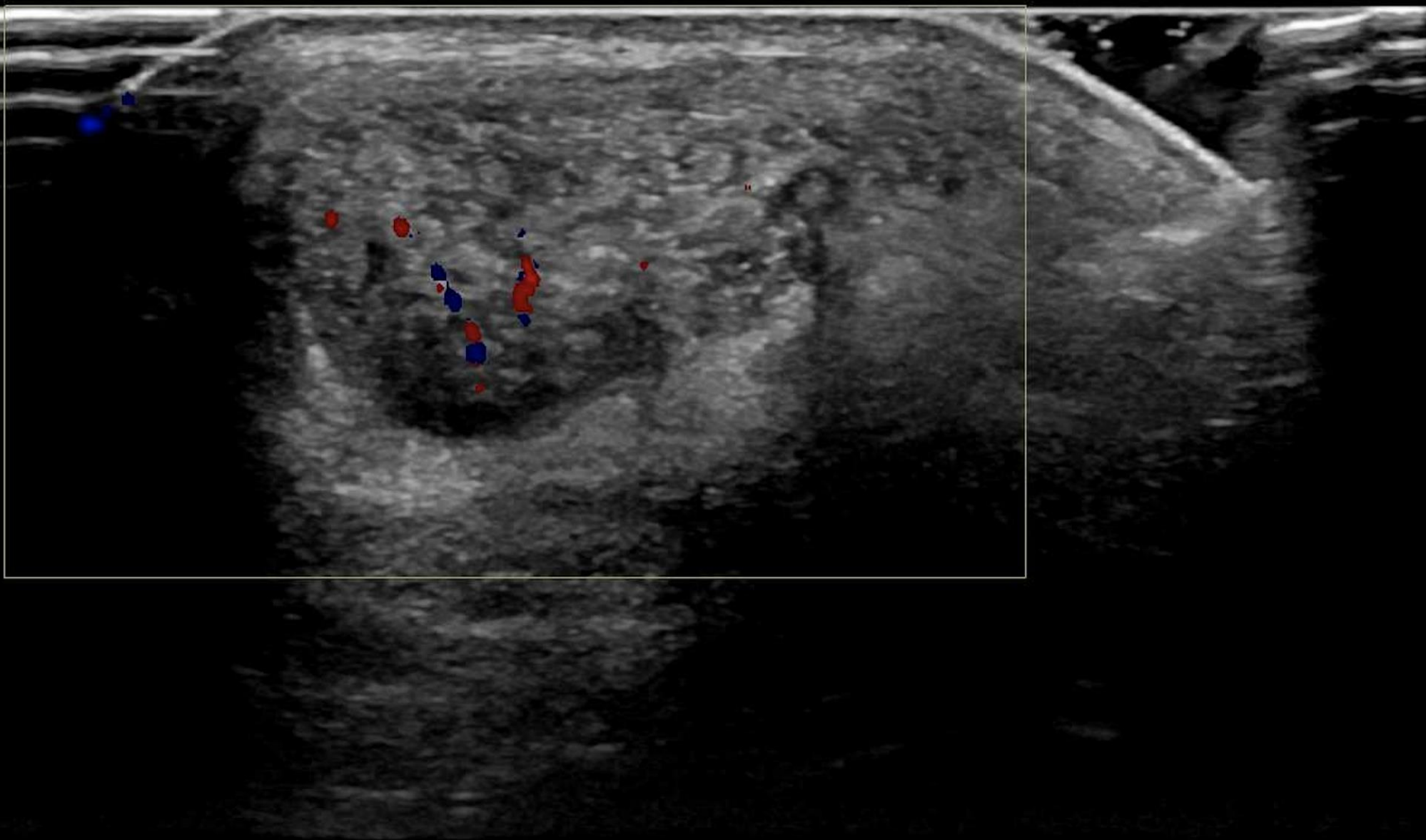


- B	
Frq	15.0
Gn	44
- D	2.5
AO%	100
- CF	
Frq	8.3
Gn	12.5
- L/A	3/2
PRF	0.4
WF	58
1 ⁻ S/P	2/16
AO%	100



2⁻

GIQ
9



- B	Frq	15.0
	Gn	44
- D	D	2.5
	AO%	100
- CF	Frq	8.3
	Gn	12.5
- L/A	L/A	3/2
	PRF	0.4
	WF	57
1-S/P	S/P	2/16
	AO%	100



2"

Protokol

- Patienten er placeret i bugleje
- Identificer behandlingsområdet ved palpation/ultralydsscanning
- Valg af ESWT teknologi: radierende eller fokuserende
- Dosis:
 - 0,1-0,3 mJ/mm² – 1,0-4,0 bar
 - 3-8 Hz
 - 800-3000 shock



Behandling

Anden behandling

- Løbesko/sko: sørg for god støddæmpende hælløft i skoene, ofte i tillæg til korrigerende skoindlæg
- Koncentrisk/excentrisk træning
- Steroid injektion: Den videnskabelige dokumentation for effekt mangler, det hænder, at erfarne behandlere anlægger injektioner langs senen (i peritendiet) med stor forsigtighed, Intratendinøs injektion er associeret med seneruptur, hvis en korrekt injektion ikke giver effekt, skal der ikke fortsættes med en ny injektion
- High Volume Injection Terapi (HVI)
- Lav-energi laserterapi
- Operativ tenosynovektomi, ca. 70 % bliver symptomfrie efter rehabilitering som består i styrketræning, udspænding og balancetræning

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