




A hand holding a large quantity of various pills and capsules, symbolizing medication. The pills are of various colors (white, yellow, orange, blue, green) and shapes (round, oval, capsule). The background is a light blue gradient.

MTSS(Medial Tibial Stress Syndrome/ Shin splint/Skinnebensbetændelse & Stresfraktur



Medial Traktions periostit – Shin splints- Medial Tibial Stress Syndrome MTSS- Skinnebensbetændelse

- Den hyppigste kroniske belastningsskade hos idrætsudøvere

Medial Tibial Stress Syndrome

MTSS

- **Symptomer**
- Gradvist indsættende diffuse smerter
- (modsat stresfraktur (akut/distinkt))
- Typisk distale 2/3 af Tibia (margo medialis)
- Initialt kun ved belastning, senere også hvilesmerter

Medial Tibial Stress Syndrome

MTSS



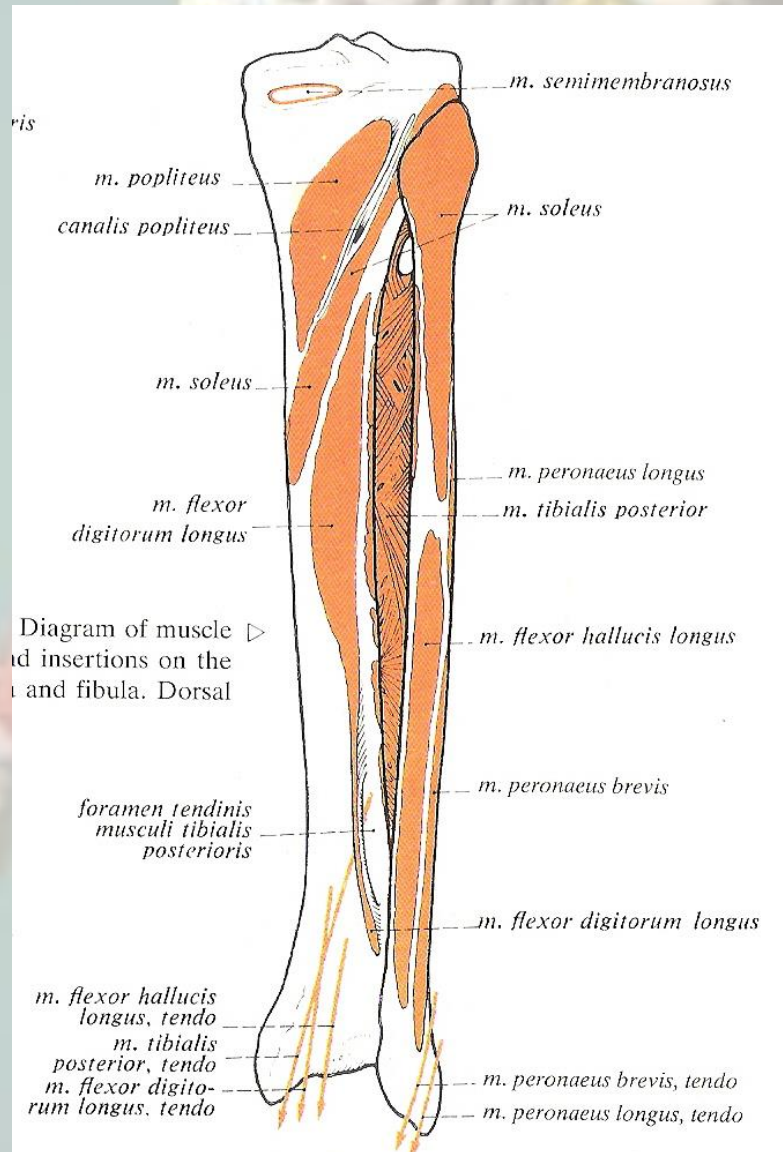
Medial Tibial Stress Syndrome

MTSS

- Ætiologi (?) / risikofaktorer:
- Udad roteret fod/ben
- Overpronation / platfod / pes planus
- For hurtig øgning af træningsmængde
- M.Tibialis post. - M.Soleus - M.Flexor digitorum longus
- ”Øget tryk i den dybe posteriore kompartment”

Medial Tibial Stress Syndrome

MTSS



Medial Tibial Stress Syndrome

MTSS

- **Diagnose**
- Anamnesen
- Palpation (øm & knudret/pitting ødem)
- Hoppetest (stresfraktur/diff.diagn.)
- Evt. paraklinik

Medial Tibial Stress Syndrome

MTSS

- **Parakliniske Undersøgelser:**
- **Rtg.:** Fortykket uregelmæssig kortikalis med.
- **Knoglescint.:** Diffus opladning langs margo med.Tibia(!)
- **UL:** fortykket periost
- **MR:** Gradering (periostit, marvødem, "soft-tissue" ødem)

Medial Tibial Stress Syndrome

MTSS

- **Behandling:**

- Aflastning
- Udstrækning
- Massage
- Aerob træning
- Korrigere fejlstillinger (f.eks. Antipronationskile)
- Lokal NSAID
- Operativ (fasciotomi)

Medial Tibial Stress Syndrome

MTSS

- Behandling:

- **IKKE**

- Ultralyd
 - Laser
 - Kortbølge
- Disse behandlingsmodaliteter er forsat under diskussion (laser)

Stresfraktur



Stresfraktur

- Ses i Tibia, Fibula, mellemfodknoglerne, bækken m.fl.
- Risikofaktorer:
- Interne: anisomeli, cavus fod, overpronation, osteopeni.
- Externe: ændring i træningsmængde, underlag, løb, hop, ekstra vægt (udstyr militær).

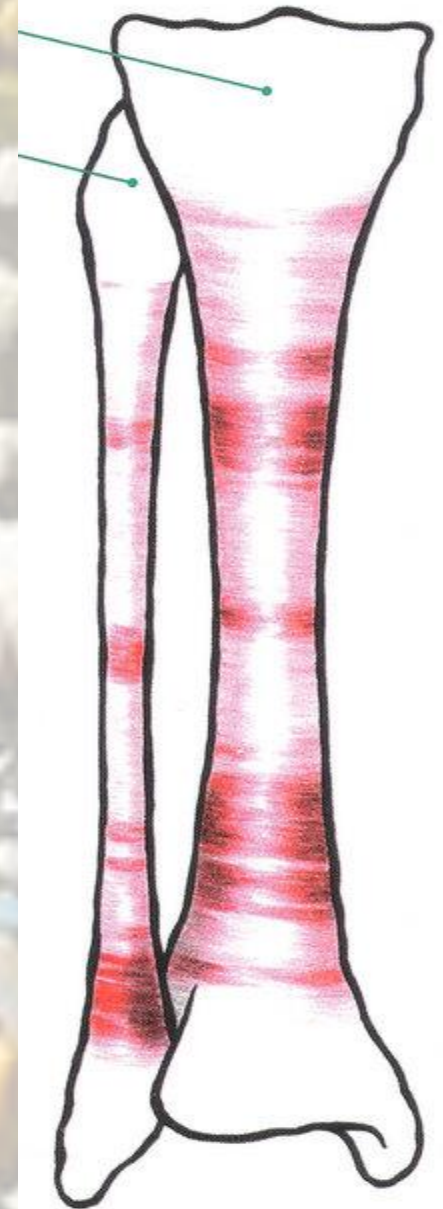
Stresfraktur

A conceptual image where the silhouette of a human head and hand is filled with a dense collection of various pills and capsules in different colors (white, yellow, blue, red, green). The background is a light, hazy blue.

- Symptomer:
- Belastningsrelaterede smerter
- Ofte akut indsættende

Stresfraktur

- Objektiv undersøgelse:
- Ét bens test
- Smerter ét punkt (peger pt. Med finger eller viser med hånd (MTSS))
- Stresfrakturer: Proximalt (generelt)
- MTSS: Distalt (generelt)
- (Tibia: proximale og distale)
- (Fibula: distale fibula)
- Rekrutter: Postero medialt



Figur 13.17. Lokalisasjon av stressfrakturer i tibia og fibula. Fargeintensiteten

Stresfraktur



- Paraklinik:
- Rtg. (ofte kun pos. Efter et par uger (callusdannelse)
- **Knoglescintigrafi** (ved neg. Rtg. Og forsat klinisk mistanke om stresfraktur)
- **MR** (ved neg. Rtg. Og forsat klinisk mistanke om stresfraktur/tumor/andet)
- **CT** (Alt efter mulighederne på den enkelte afdeling)

Stresfraktur



- Behandling:
- Aflastning
- Bandagering 6-8 uger
- Operation
- Anteriore stresfraktur: dårlig heling ofte operation
- Posteromediale stresfraktur: spontan heling ved aflastning.

Stresfraktur



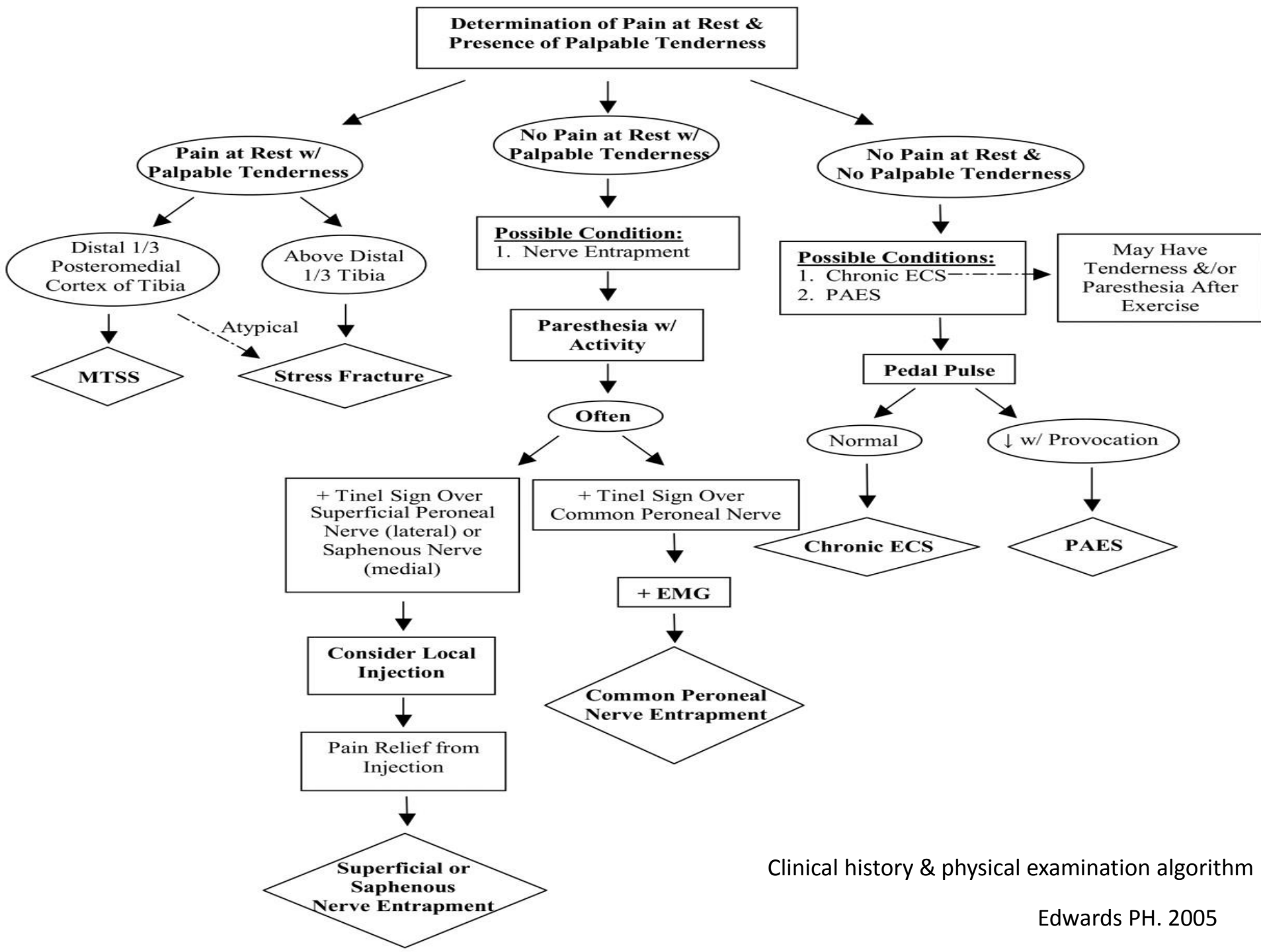
- Komplikationer:
- Pseudoarthrose/falsk led.
- Behandling: oprensning og marvsøm

Stresfraktur//MTSS

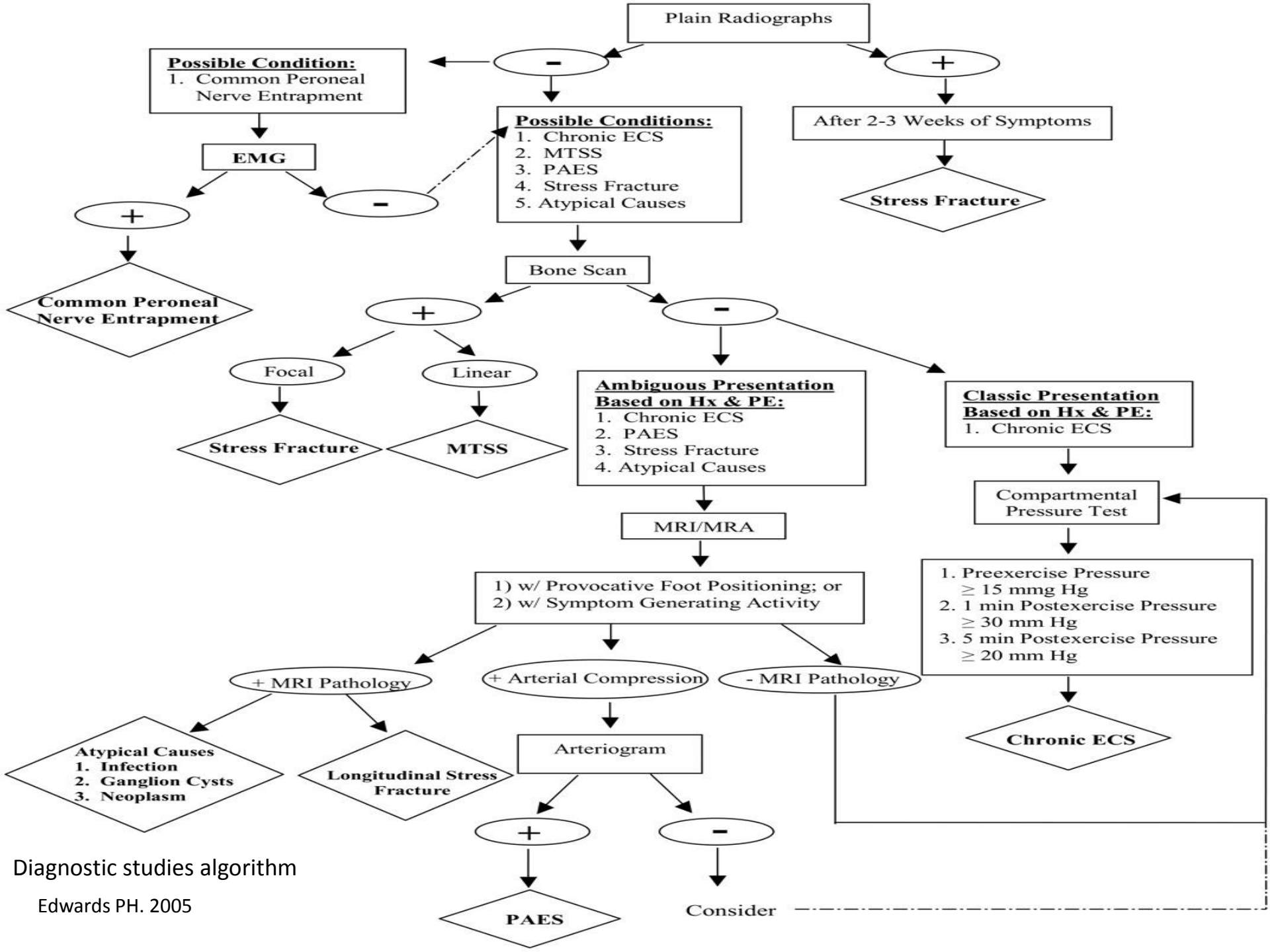
STRESFRAKTUR	MTSS
Akut indsættende	Snigende symptomer
Smerter i enkelt punkt	Smerter i et område
Smerter midt og prox på underbenen (tib/fib)	Smerter distalt i benet
Smerterne ophører ved belastning	Lindring ved ophør, men fortsatte smerter

Table 6.1.1 Characteristics of and differences between tibial stress syndrome, compartment syndrome and stress fractures.

	Tibial stress syndrome	Chronic compartment syndrome	Stress fracture
History	Running on hard surface. Hyperpronation? Quite diffuse pain during weight-bearing and activity, but pain may decrease during activity	Increase or change of training No pain at rest Increasing pain with increasing activity. Paresthesia may occur	Huge increase of activity and load Can be progression of tibial stress syndrome Sudden onset Localized pain even during small load
Findings	Tenderness of tibial edges, small tender swellings on tibia	Tenderness of musculature	Localized tenderness of the bone
Investigations	Basically clinical examination Bone scan may show periosteal activity, and may be normal	Compartment pressure measurements: > 15 mmHg pre-exercise > 30 mmHg 1 min after exercise > 20 mmHg 5 min after exercise	Bone scan: activity in the bone X-rays MRI
Treatment	Conservative: Medial stress: antipronation support, muscle training, reduction of training load Anterior stress: shock absorption (shoes, surface) Operative treatment?	Surgical: Fasciotomy	Conservative: Medial fracture: reduce load and training for 3 months Anterior stress: full reduction of load Surgery: osteosynthesis



Clinical history & physical examination algorithm



Diagnostic studies algorithm

SLUT

