

***ESWT for Soft Tissue
Pathologies: Case Review***



7th International Congress

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***ESWT for Soft Tissue
Pathologies: Case Review***

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BRAZIL

Objective

- Retrospective study
- Electro hydraulic high-energy device REFLECTRON – HMT
- 3 Brazilian Centers



Materials and Methods

March 2001 to May 2003

- X-rays and ultrasound: before treatment, 3 and 6 months after
- Indication with minimum of 6 months of unsuccessful conservative treatment
- Patients were reviewed at 1, 3 and 6 months




Materials and Methods

March 2001 to May 2003

<i>Pathologies</i>	<i>Treated</i>	<i>with Follow-up</i>
Tendinosis calcarea of the shoulder	60	59
Tendinosis of the shoulder	26	26
Epicondylitis	42	40
Trochanteric bursitis	24	24
Achilles tendon calcifying (or not) tendinosis	39	36
Plantar fasciitis	69	68
Total of patients	260	253

Number of treatments

Treatments	Number of Patients
1 	235
2 	21
3 	2



-  1200 - 1500 pulses
-  E3 (3.32 mJ) to E7 (3.60 mJ)
-  HMT Parameters

Results

Roles and Maudsley score

Grade 1	Excellent	no pain, full movement and activity
Grade 2	Good	occasional pain, full movement and activity
Grade 3	Acceptable	some discomfort after prolonged activity
Grade 4	Poor	pain limiting activity

Tendinosis calcarea of the shoulder

Treatments	Cases	1 month	3 months	6 months
1 	55	53%	76%	77%
2 	4	40%	48%	68%

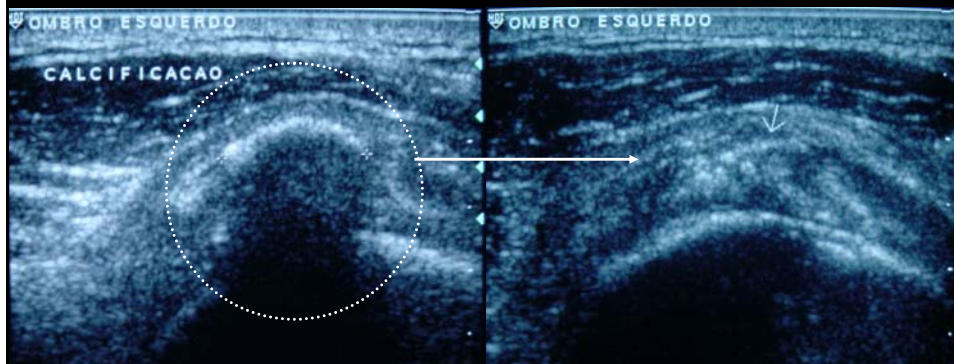
Tendinosis calcarea of the shoulder



Tendinosis calcarea of the shoulder

before ESWT

3 months after ESWT



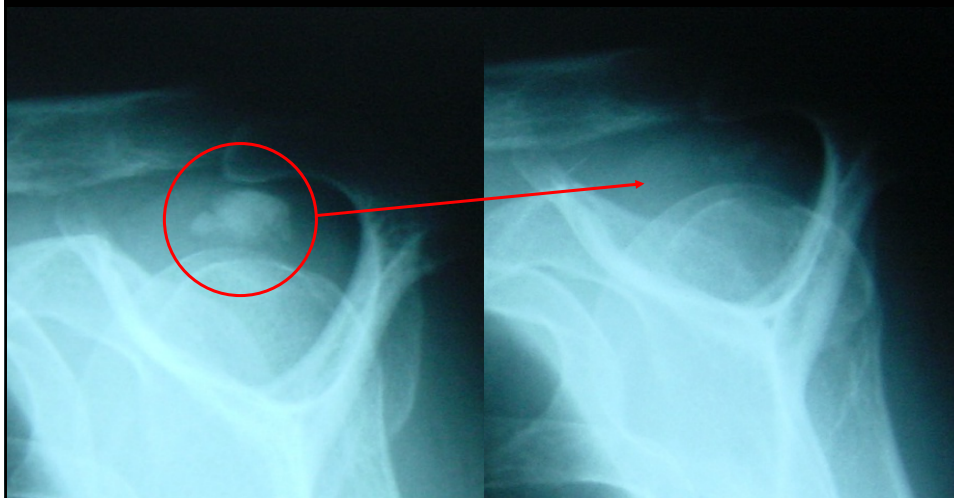
calcified deposit with shade

hyperechogenic focus with no shade

Tendinosis calcarea of the shoulder

before ESWT

3 months after ESWT



Tendinosis calcarea of the shoulder

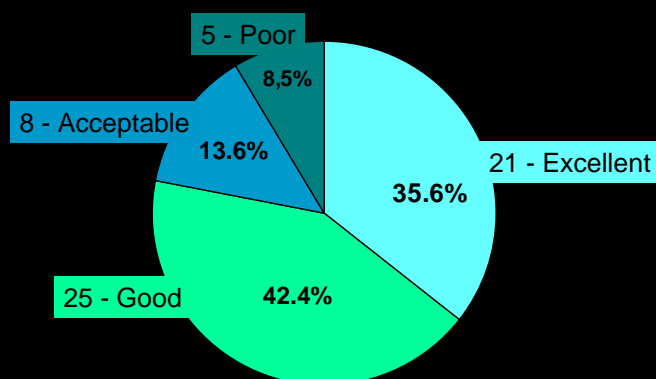
before ESWT



3 months after ESWT



Tendinosis calcarea of the shoulder



Roles and Maudsley score		
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Tendinosis calcarea of the shoulder

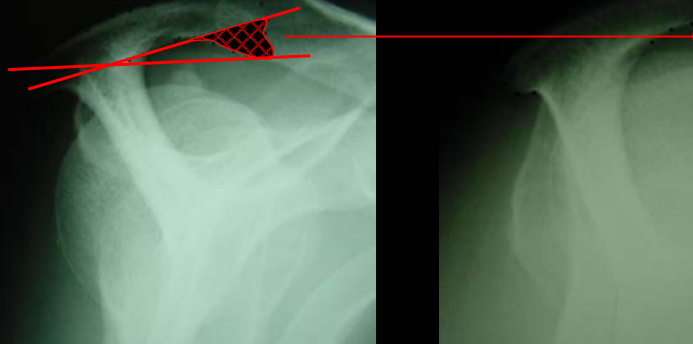
Male, 56 y.o., 4 years pain

Poor result: undergone to surgery



Tendinosis calcarea of the shoulder

Subacromial decompression



Planning surgical procedure:

- Draw a line from the front tip to the back edge
- Draw another line along the posterior undersurface
- The distance between these lines is the amount of bone that will be resected

Tendinosis calcarea of the shoulder



Tendinosis calcarea of the shoulder

before



6 months after surgery



Tendinosis calcarea of the shoulder



6 months after surgery



Tendinosis calcarea of the shoulder



6 months after surgery



Tendinosis calcarea of the shoulder



6 months after surgery



Tendinosis calcarea of the shoulder

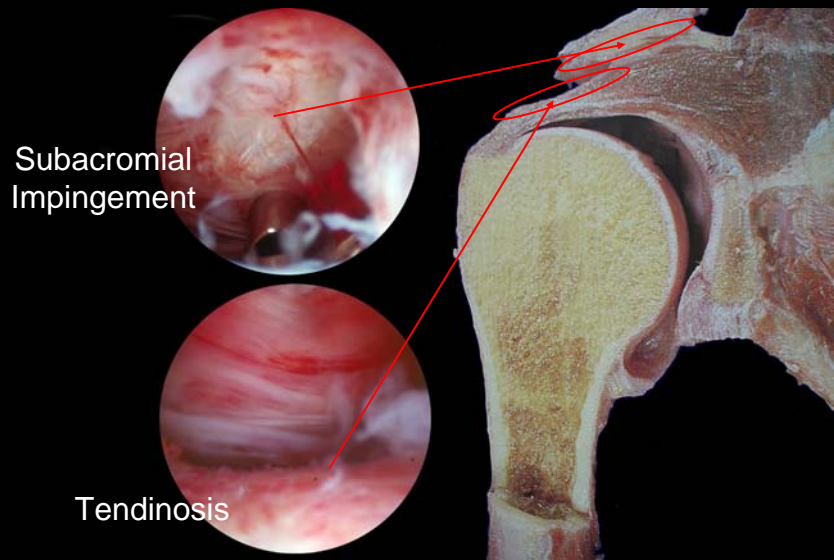


6 months after surgery






Tendinosis of the shoulder

Indication: late Stage II (Neer)



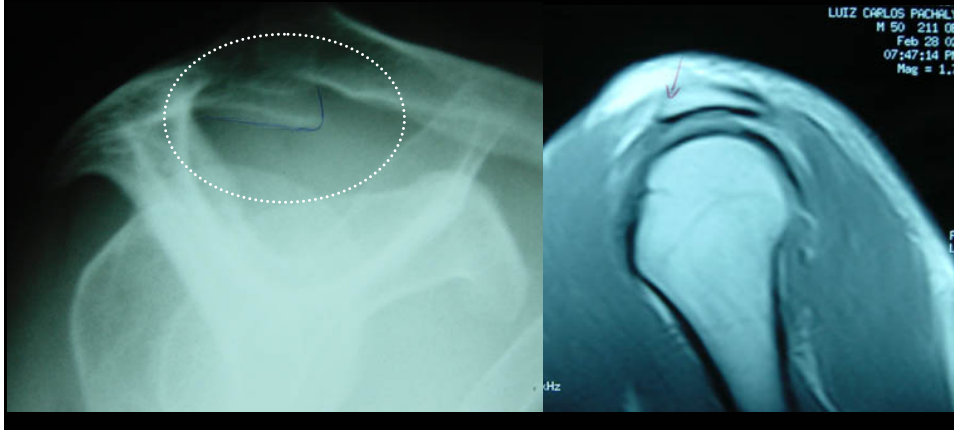
Tendinosis of the shoulder

Treatments	Cases	1 month	3 months	6 months
1 	25	69%	74%	82%
2  	1	70%	100%	100%

Tendinosis of the shoulder

Male, 50 y.o., swimmer, 6 months pain

Acromio Type II - curved



Tendinosis of the shoulder

Stage II: fibrosis and tendinitis



Tendinosis of the shoulder

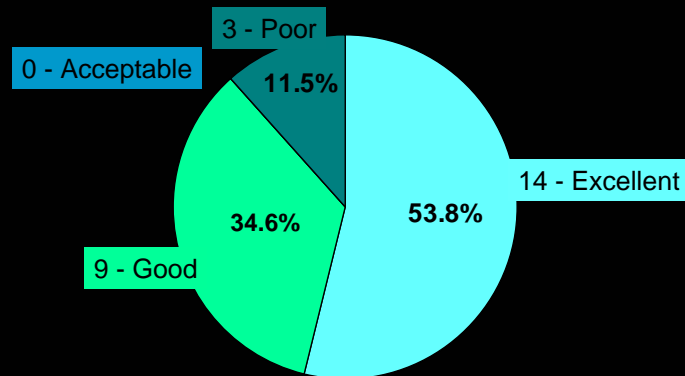
3 months after ESWT



Tendinosis of the shoulder





Tendinosis of the shoulder



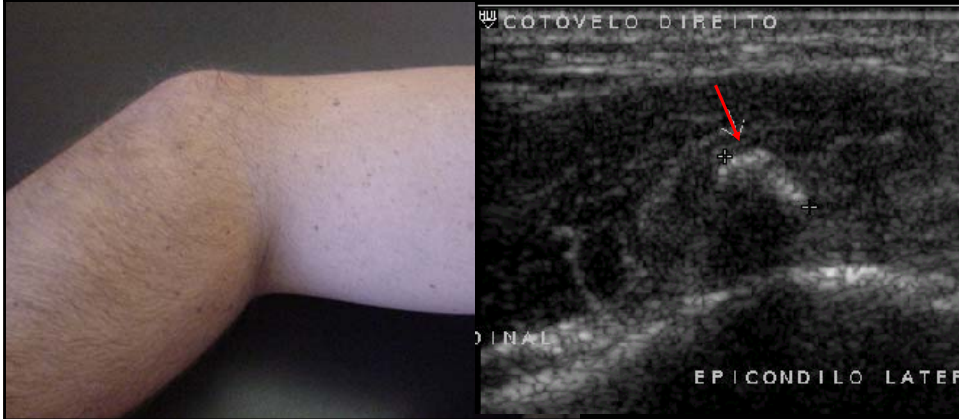
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Epicondylitis

Treatments	Cases	1 month	3 months	6 months
1 	32	48%	72%	76%
2 	8	55%	65%	70%

Epicondylitis

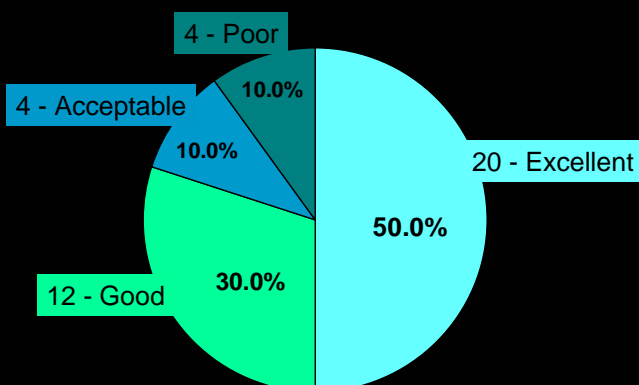
Male, 40 y.o., tennis player and amateur boxer, 15 years pain



Epicondylitis





Epicondylitis



Roles and Maudsley score		
Grade 1	Excellent	no pain, full movement and activity
Grade 2	Good	occasional pain, full movement and activity
Grade 3	Acceptable	some discomfort after prolonged activity
Grade 4	Poor	pain limiting activity

Trochanteric bursitis

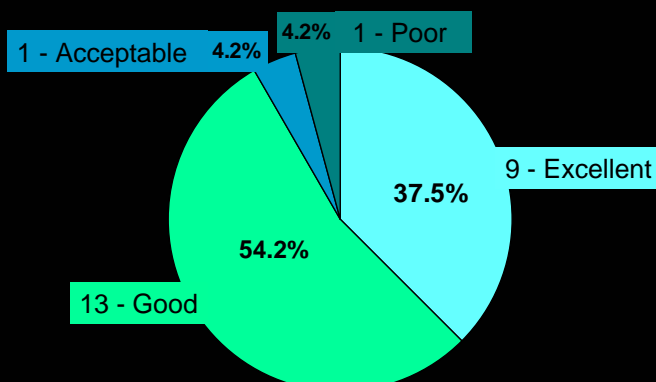
Treatments	Cases	1 month	3 months	6 months
1 	23	74%	84%	89%
2 	1	50%	80%	75%

Trochanteric bursitis with calcification

Female, 53 y.o., 3 years pain






Trochanteric bursitis



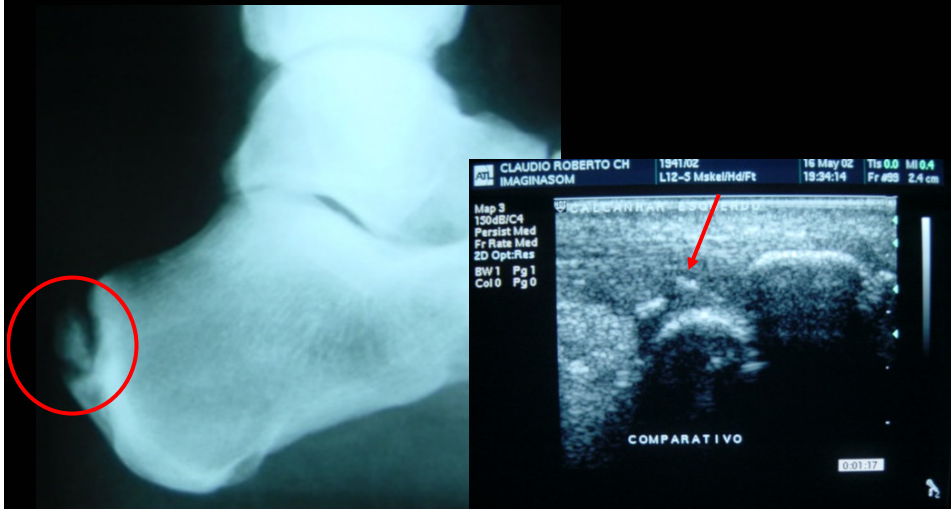
Roles and Maudsley score		
Grade 1	Excellent	no pain, full movement and activity
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Achilles tendon calcifying (or not) tendinosis

Treatments	Cases	1 month	3 months	6 months
1 	32	48%	67%	71%
2 	3	50%	53%	52%
3 	1	80%	30%	80%

Achilles tendon calcifying (or not) tendinosis

Male, 59 y.o., 5 years pain

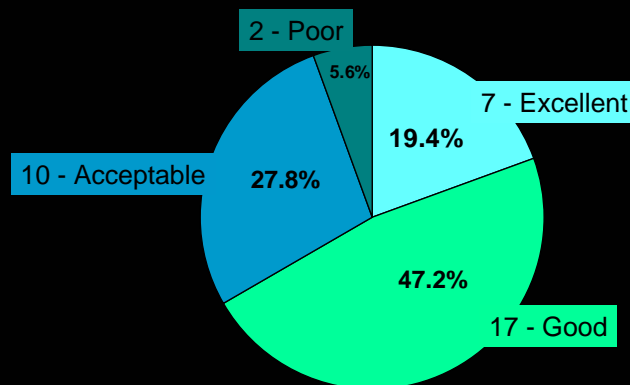


Achilles tendon calcifying (or not) tendinosis



5 months after ESWT
95% improvement

Achilles tendon calcifying (or not) tendinosis



Roles and Maudsley score		
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Achilles tendon calcifying tendinosis

Male, 50 y.o., 2 years pain

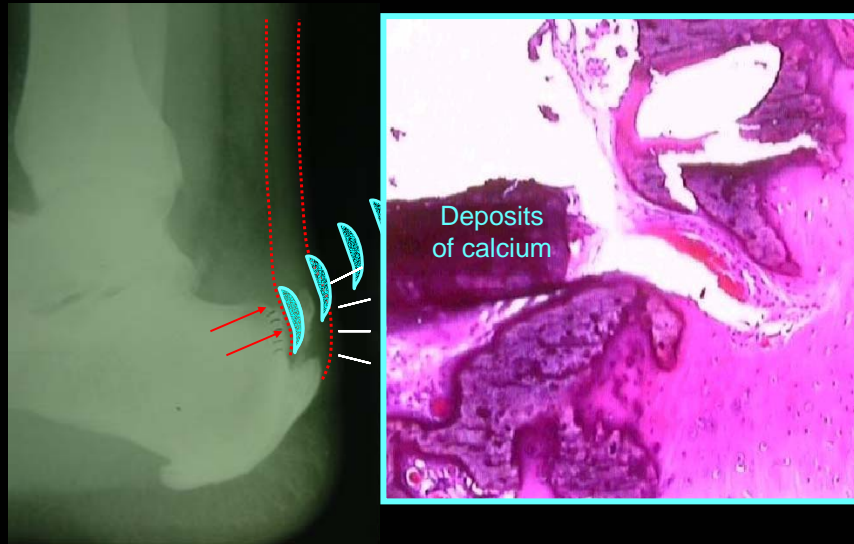
Poor result: undergone to surgery



Achilles tendon calcifying tendinosis



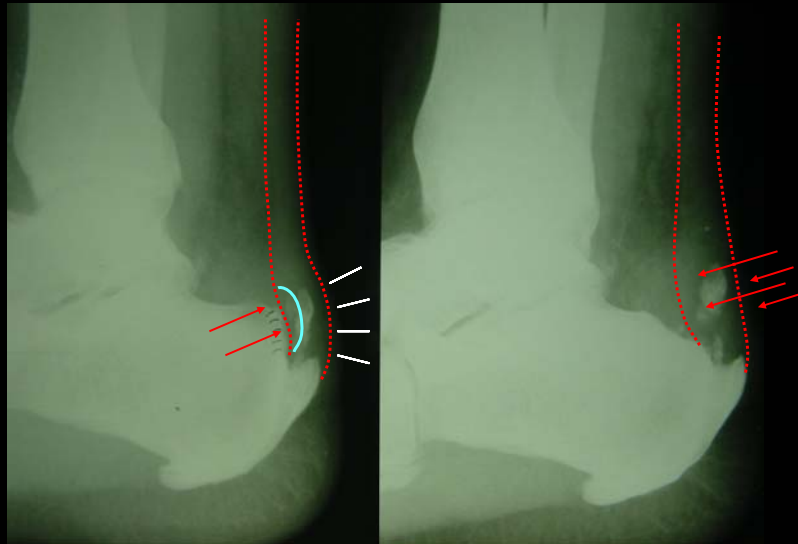
Achilles tendon calcifying tendinosis



Achilles tendon calcifying tendinosis



Achilles tendon calcifying tendinosis

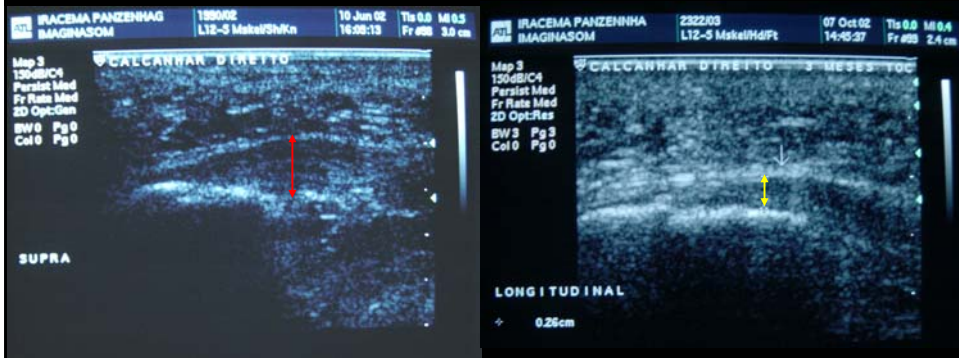


Plantar fasciitis

Treatments	Cases	1 month	3 months	6 months
1 🦶	65	51%	69%	77%
2 🦶 🦶	2	0%	90%	90%
3 🦶 🦶 🦶	1	50%	50%	30%

Plantar fasciitis

Female, 53 y.o., 3 years pain



3 months after ESWT
100% improvement

Plantar fasciitis

Female, 65 y.o., 13 years pain



Plantar fasciitis



Plantar fasciitis



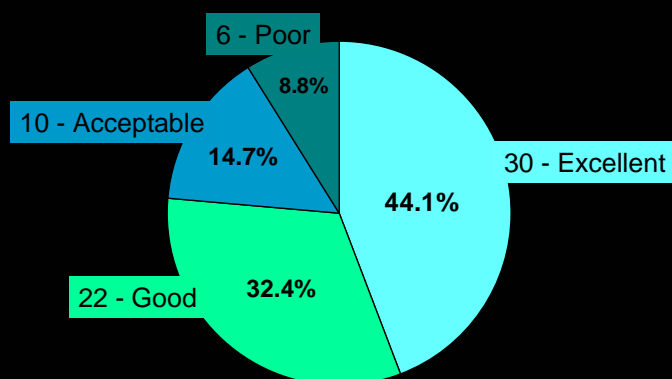
1 year after ESWT

Plantar fasciitis



1 year after ESWT

Plantar fasciitis



Roles and Maudsley score		
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Results

253 patients

<i>Pathologies</i>	Excellent and Good (Grade 1- 2)	
Tendinosis calcarea of the shoulder	46	77.96%
Tendinosis of the shoulder	23	88.46%
Epicondylitis	32	80%
Trochanteric bursitis	22	91.66%
Achilles tendon calcifying (or not) tendinosis	24	66,66%
Plantar fasciitis	52	74.47%

Follow-up 6 – 14 months

Thank You

Rockett

