

Instituto Psoal de Reumatología

Ultrasound of the HIP JOINT

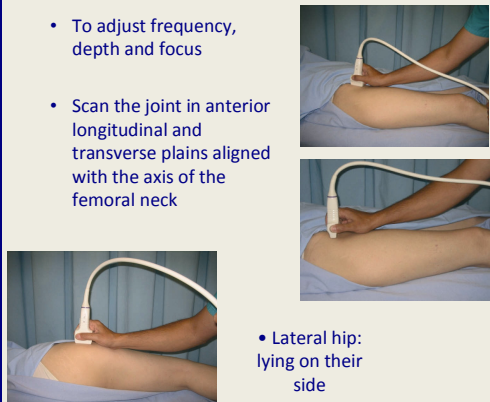
Ingrid Möller Parera

Ultrasound School of the Spanish Society of Rheumatology
OMERACT/EULAR working group for MSUS

I. Möller

US examination of the hip

- To adjust frequency, depth and focus
- Scan the joint in anterior longitudinal and transverse plains aligned with the axis of the femoral neck




- Lateral hip: lying on their side

Instituto Psoal de Reumatología

I. Möller

Checklist: Anterior



Acetabulum
Femoral head
Labrum
Capsule
Ilio-femoral ligament

Iliopsoas bursa

Muscles- Superficial –TFL
Sartorius
Deep-Rectus femoris
Iliopsoas

Neurovascular: Femoral nerve,artery,vein
Lateral femoral cutaneous nerve

Instituto Psoal de Reumatología

I. Möller

Checklist: Lateral



Greater trochanter
Lesser trochanter

Muscles- Superficial- "Deltoid of Farebauf"-Tensor fascia lata
Fascia lata
Gluteus medius

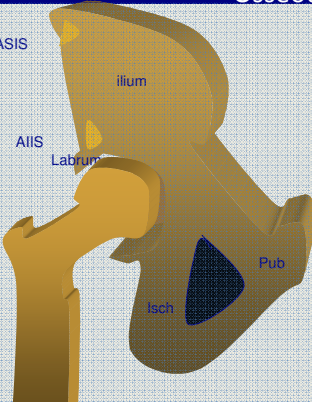
Deep- "Abductor cuff"-Gluteus minimus
Gluteus medius

Peritrochanteric Bursae: -Trochanteric
Subgluteus maximus
Subgluteus medius
Subgluteus minimus

Instituto Psoal de Reumatología

I. Möller

Osseous anatomy

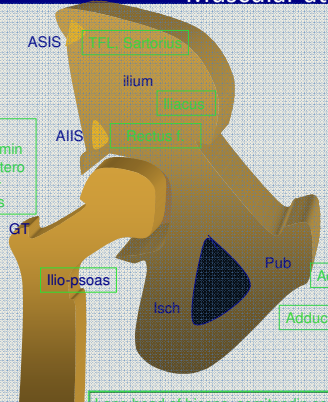


ASIS
ilium
AIIS
Labrum
GT
Pub
Isch

Instituto Psoal de Reumatología

I. Möller

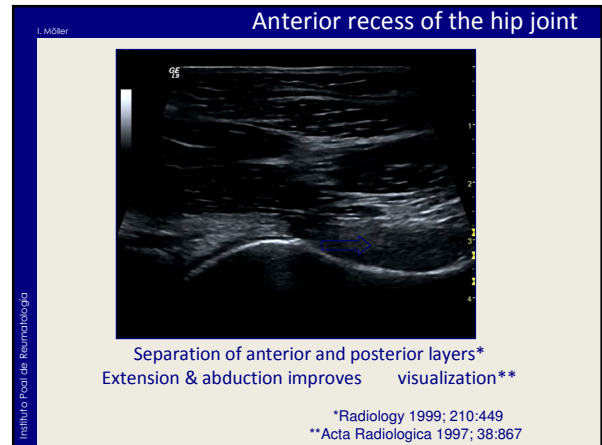
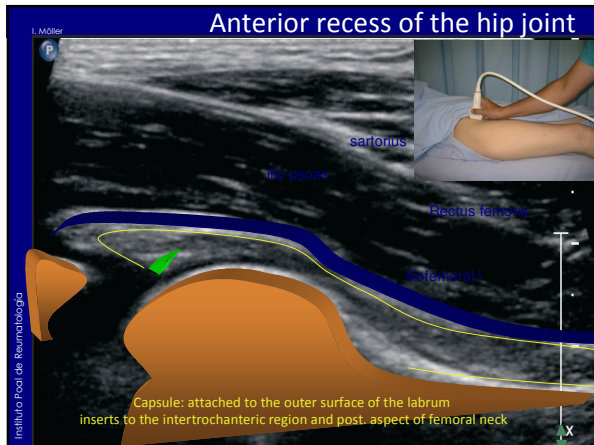
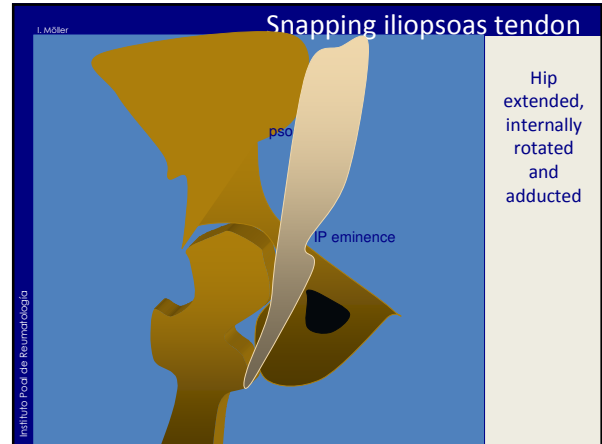
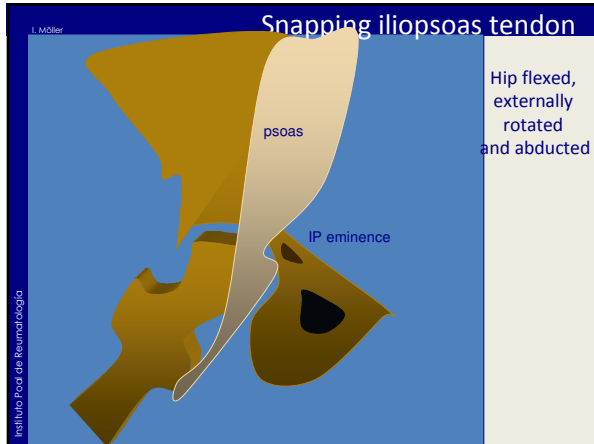
Muscular attachments



ASIS
ilium
AIIS
GT
Ilio-psoas
Isch
Pub

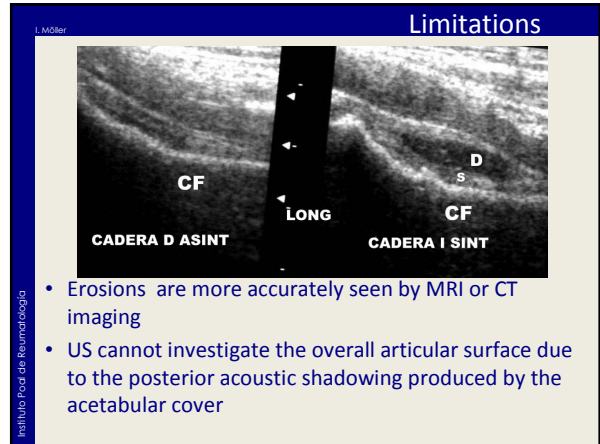
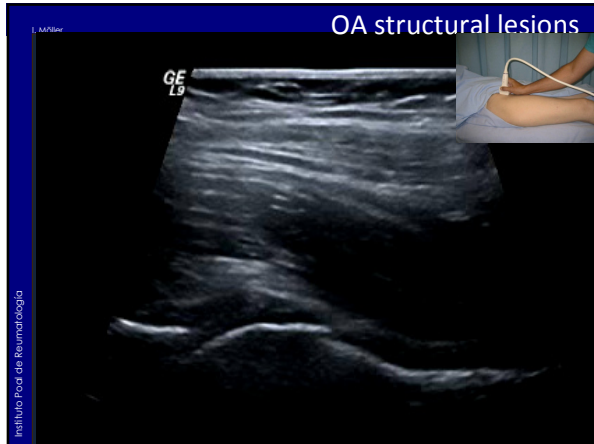
TFL, Sartorius
Iliacus
Rectus femoris
Anterior-G. min
Lateral/ Postero
Superior
G. medius
Adduc. longus, gracilis
Adduc. magnus and brevis
Long head of biceps, semitendin semimemb.

Instituto Psoal de Reumatología



- I. Möller
- ### Anterior and medial pathology
- Arthritis
 - Osteoarthritis: activity, structural lesions
 - Iliopsoas bursitis
 - Metabolic diseases
 - Instability and painful snapping: iliopsoas tendon
 - Tendon, muscle injuries: adductor longus, tensor fascia latae, rectus femoris...
 - Apophyseal avulsions
 - Chronic tears
- Instituto Pódi de Reumatologia

- I. Möller
- ### OA Activity
-
- Cannot be palpated
 - US images obtained longitudinally over the anterior femoral neck
 - Hypo-anechoic collection which shows variable echogenicity depending on the nature of the fluid content
 - PD imaging might be helpful to distinguish synovium from fluid
- Instituto Pódi de Reumatologia



I. Möller

HIP Score

Hip

Reproducibility and inter-reader agreement of a scoring system for grey scale ultrasound assessments of hip osteoarthritis.
Qvistgaard E et al Ann Rheum Dis 2006

- Scoring system for qualitative sub classification of ultrasound of the hip joint in osteoarthritis
- 100 patients hip OA
- Evaluation to the repeatability and reproducibility of four specifically defined ultrasound parameters for hip osteoarthritis
- To investigate the clinical relevance of the chosen parameters compared with the radiographic findings.

ICC	Intra observer	Inter observer
Osteophyte	0.80	0.65
Femoral head	0.78	0.63
Fluid	0.71	0.45
Sinovial profile	0.69	0.60

Instituto Pólo de Reumatologia

I. Möller

Hip joint :PD

Radiology 2002; 225:225-231

Radiology

Markus Walther, MD, PhD
Harry Harms, PhD
Veit Krenn, MD
Stephan Radke, MD
Stephan Kirschner, MD
Frank Gohlke, MD, PhD

Synovial Tissue of the Hip at Power Doppler US: Correlation between Vascularity and Power Doppler US Signal¹

Index terms:

The hip joints of 24 patients with osteoarthritis (15) or rheumatoid arthritis (9) of the hip joint were examined with US before arthroplasty. The correlation between the qualitative power Doppler US results and the qualitative vascularity grades was 0.92 (P < 0.01, Spearman)

Instituto Pólo de Reumatologia

I. Möller

Guided injections

Instituto Pólo de Reumatologia

- Patient in supine position
- Skin disinfection
- Needle (gauge 21, 0.8x80 mm)
- Guided by US, interior insertion 8-10 cm under the inguinal ligament towards the anterior/inferior capsule below the femoral head.
- Joint fluid aspiration if present.

I. Möller

Conclusion

US of the hip in adults:

- Osteoarthritis
- Guided injection
- Tendinopathy
- Bursitis
- Arthritis

Instituto Pólo de Reumatologia