Collège Hospitalier et Universitaire de Chirurgie Pédiatrique

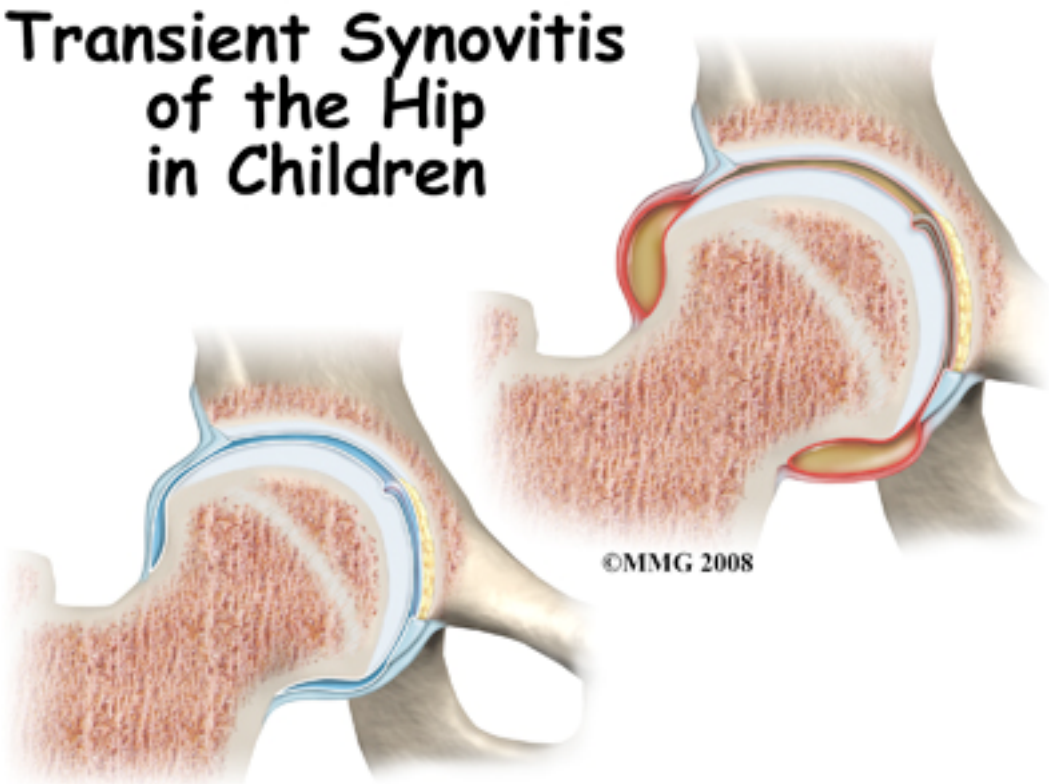
DESC de Chirurgie Pédiatrique

Session de mars 2011 - PARIS

Rhume de hanche

Raphaël VIALLE

“RHUME DE HANCHE”



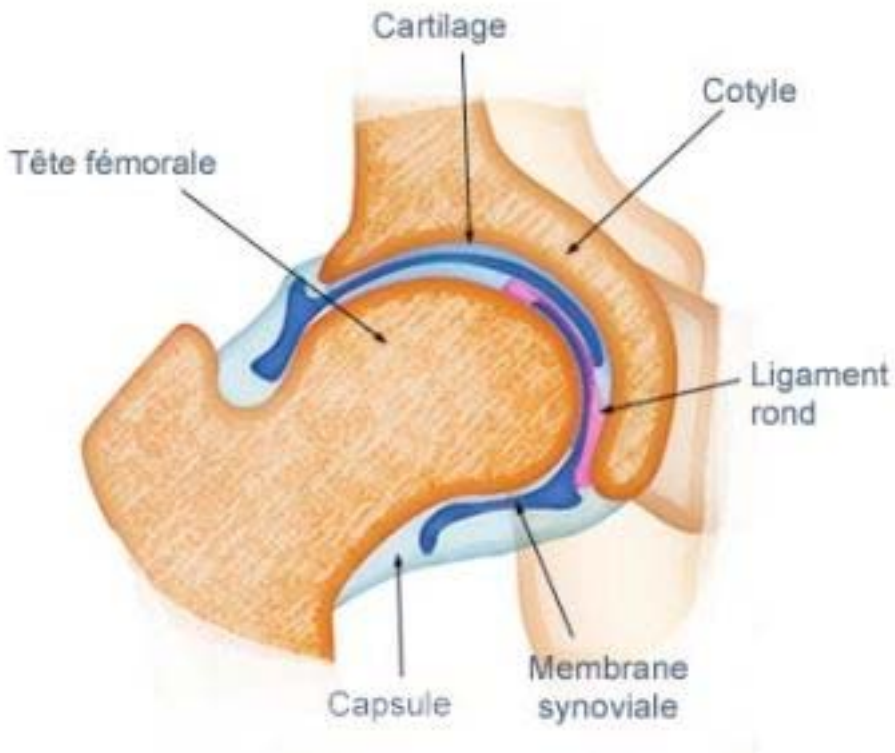
Raphaël VIALLE
Service d’Orthopédie Pédiatrique – Hôpital Armand Trousseau – Paris
Université Pierre et Marie Curie – Paris 6

Rhume de hanche
Rhume de cerveau

Terme impropre…

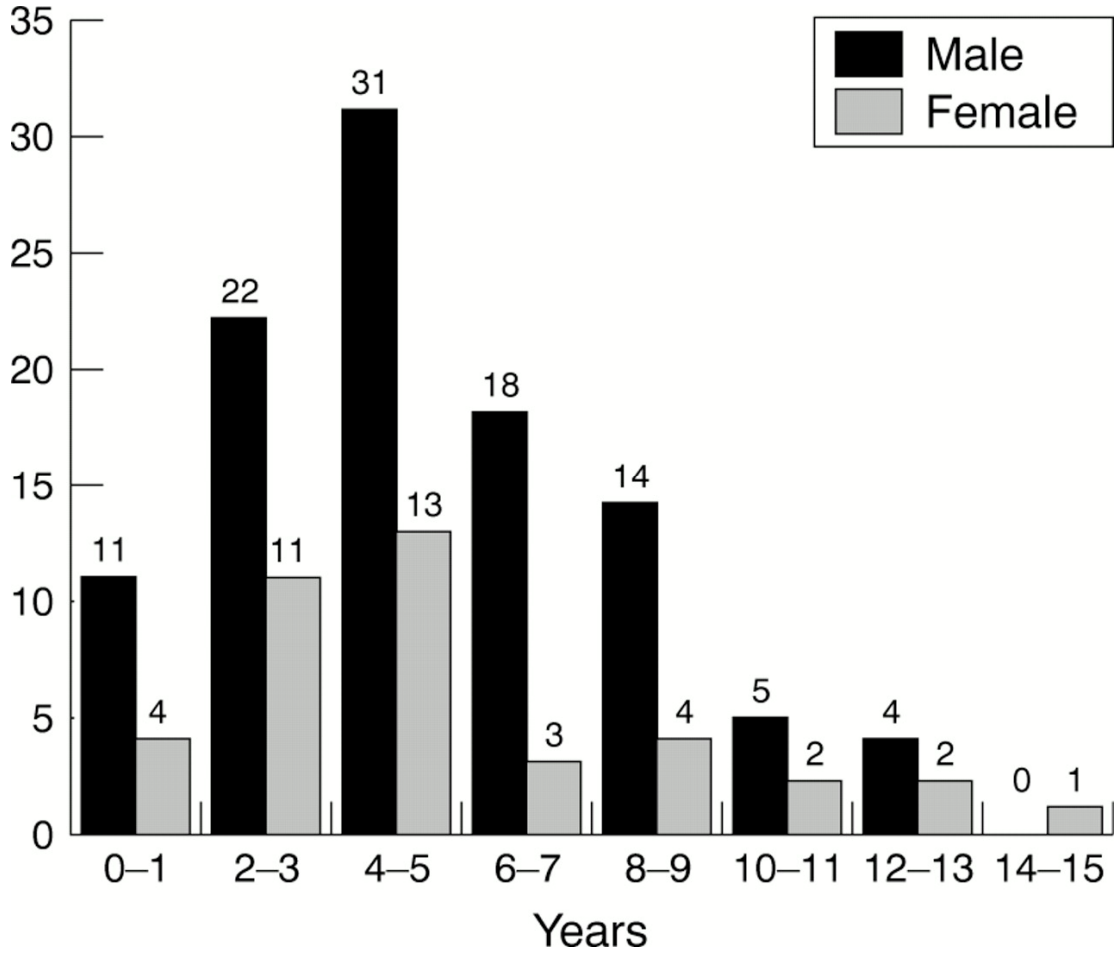
Transposition anglo-saxonne ??? (“hip cold”)

SYNOVITE AIGUE TRANSITOIRE de HANCHE



C'est une arthrite réactionnelle virale (30%) ou microtraumatique (5%).

Les garçons sont plus souvent touchés dans une tranche d'âge de 3 à 10 ans.



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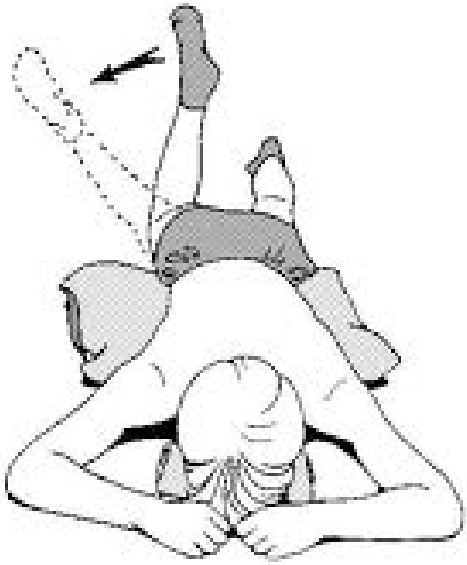
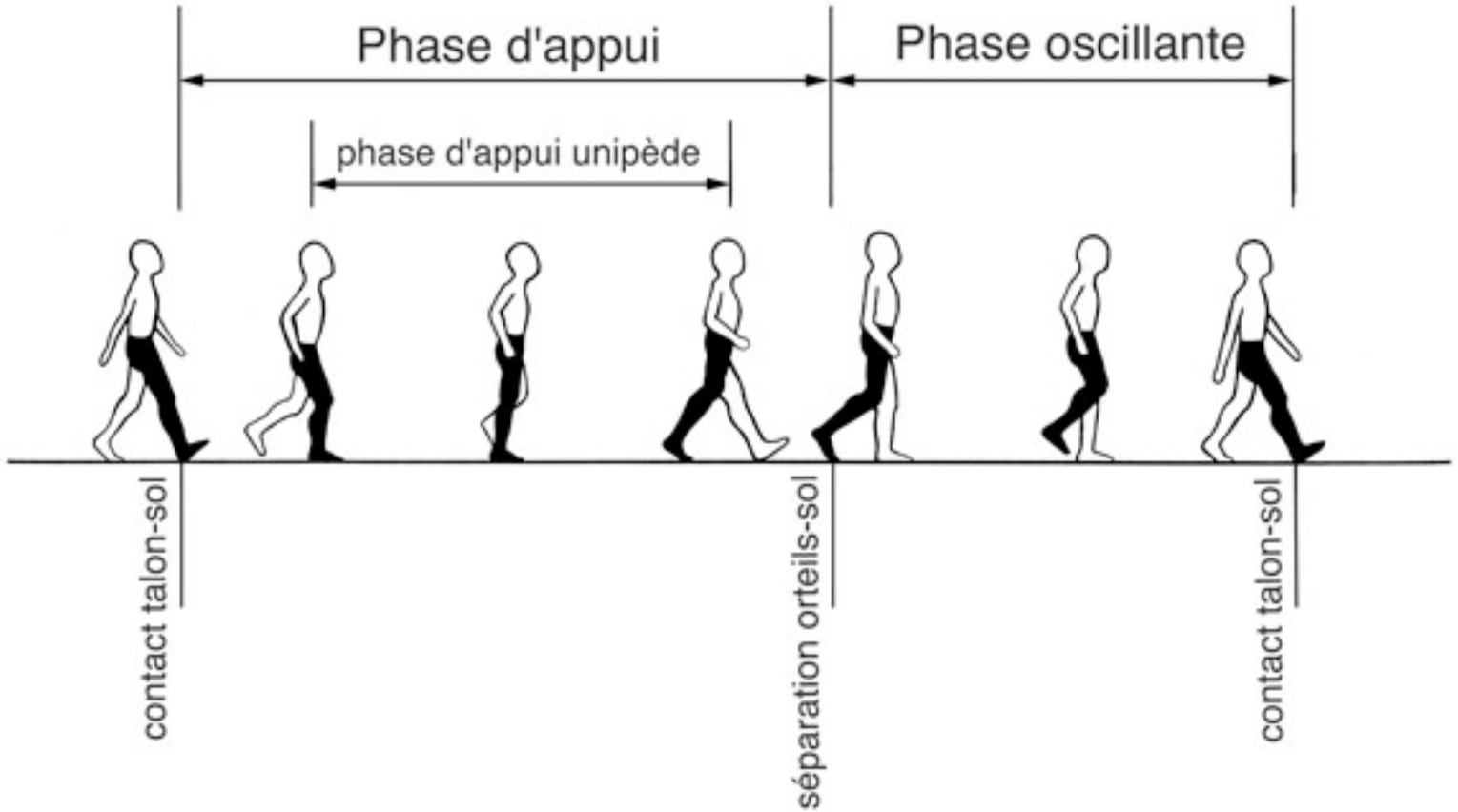
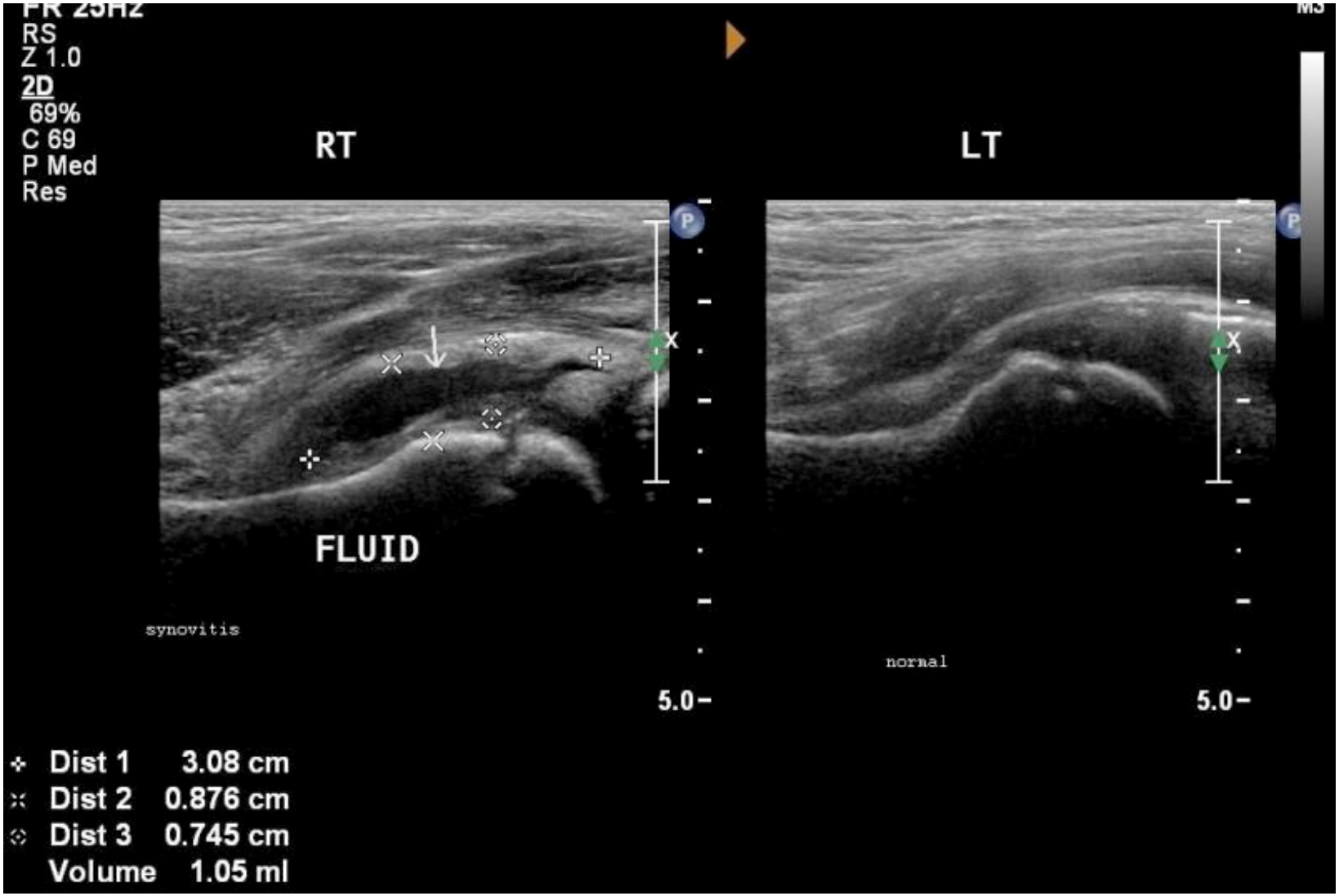


L'arthrite est quasiment toujours unilatérale.

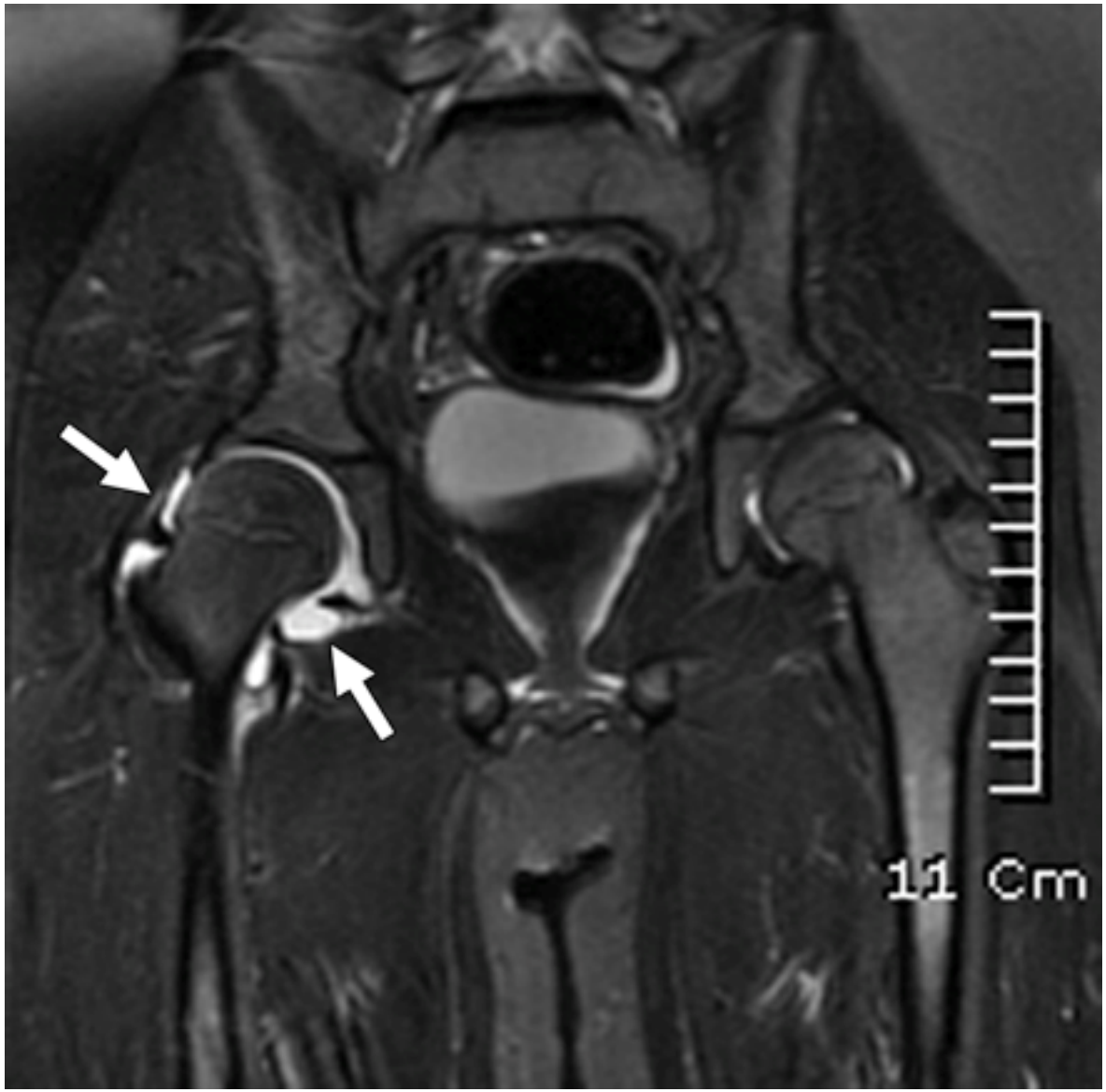


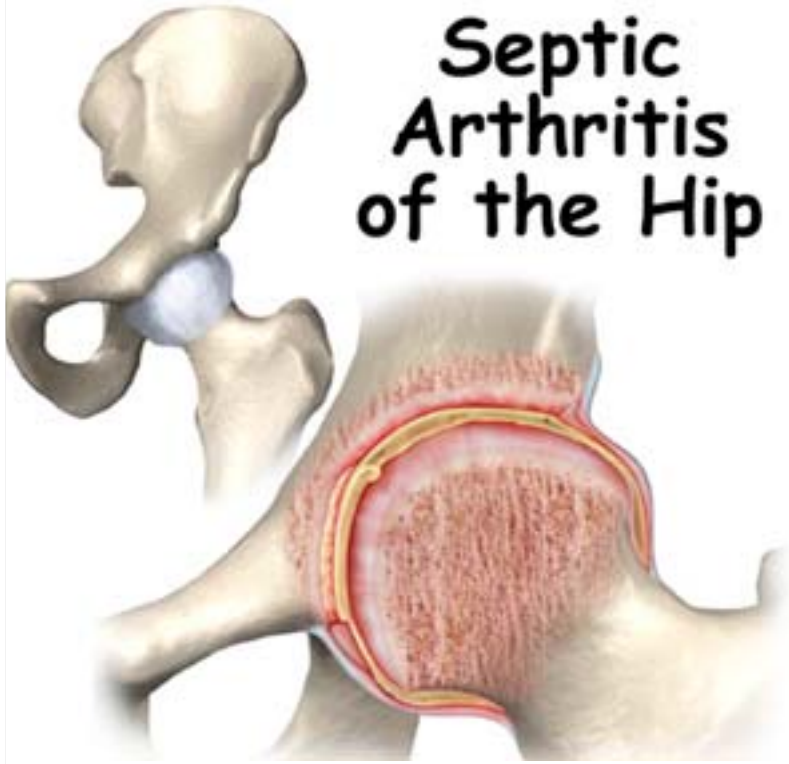
Généralement l'enfant boite, mais il peut aussi se plaindre de sa jambe, ne plus la bouger, ou se plaindre d’une douleur du genou



L'échographie de la hanche doit permettre de confirmer le présence de liquide.

IRM ???





S'il y a doute, il faut rechercher un syndrome inflammatoire, exclure une arthrite bactérienne.

* Repos, Repos, Repos
* Anti-inflammatoires
* Traction +/- ponction en milieu hospitalier si trop douloureux

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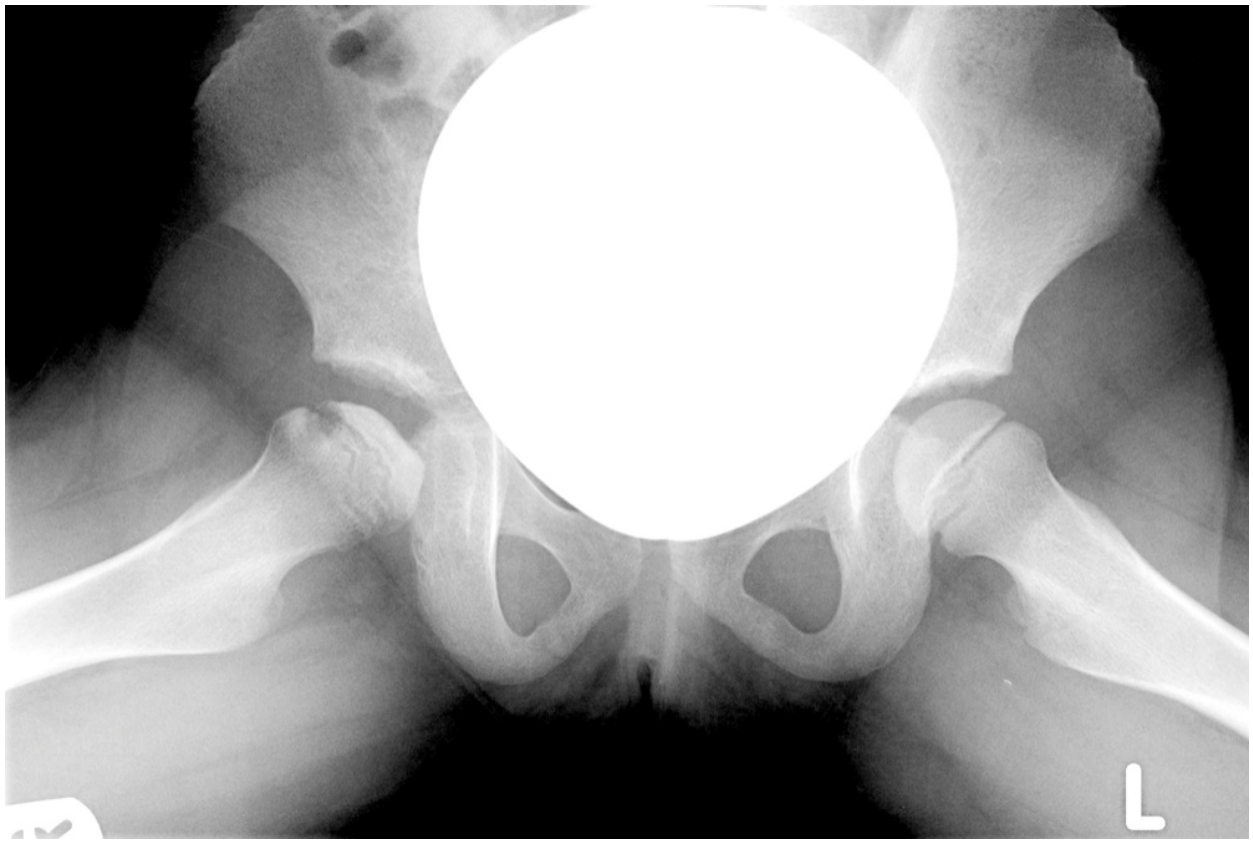
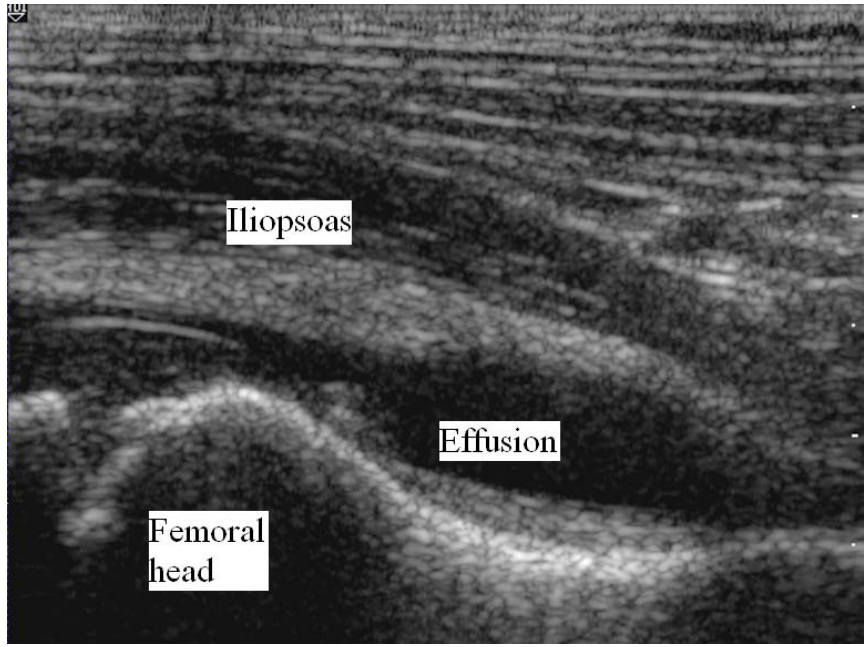


* L'arthrite peut être le début d'une maladie plus chronique.
* Si le problème persiste, il faut reconsulter.

Radiographie de bassin systématique entre 4 et 6 semaines

Petite actualité de la Synovite Aigüe transitoire de Hanche

VS



VS

Ultrasound is better than x-ray at detecting hip effusions in the limping child

Author, date and country	Patient group	Study type (level of evidence)	Outcomes
Adam R et al, 1986, UK	87 children with irritable hip	Diagnostic	Detection of effusions
Rosenborg M and Mortensson W, 1986, Sweden	58 examinations of 47 children, 40 of whom had acute unilateral transient synovitis of the hip	Diagnostic	Detection of effusions
Zieger MM et al, 1987, Germany	123 consecutive patients with suspected joint effusions	Diagnostic	Detection of effusions
Miralles M et al, 1989, Spain	500 children with a painful hip or a limp	Diagnostic	Detection of effusions Change in clinical care
Bickerstaff DR et al, 1990, UK	111 children with acute hip pain	Diagnostic	Change in clinical care Detection of effusions
Terjesen T and Osthus P, 1991, Norway	59 children with acute synovitis of the hip.	Diagnostic	Detection of effusions

Ultrasound is better than x-ray at detecting hip effusions in the limping child

Key results
28 of 47 children with an effusion on ultrasound had x-ray abnormalities
43% of 23 children with an effusion on ultrasound had iliopsoas fatty layer sign on plain x-ray, while 52% had and abnormal capsular fat pad sign.
USS 100% sensitive
58 of 235 patients with effusions on ultrasound had abnormal x-rays. 4 patients with normal ultrasounds had abnormal x-rays.
USS detection of effusion changed clinical care in only 6 cases
X-ray changed clinical care in only 2 cases (children with Perthes' disease)
Effusion detected in 71% by USS but only in 15% by x-ray.
Effusions detected in all patients by USS, but in none by x-ray.

The role of ultrasound in differentiating septic arthritis from transient synovitis of the hip in children

Mohamed Medhat Zamzam

Journal of Pediatric Orthopaedics B 2006, **15**:418–422

Keywords: hip joint, septic arthritis, transient synovitis, ultrasound

King Khalid University Hospital (KKUH), Riyadh, Saudi Arabia

Correspondence and requests for reprints to Dr Mohamed Medhat Zamzam, MD, King Khalid University Hospital (KKUH), P.O. Box 7805, Riyadh 11472, Saudi Arabia

Tel: +96614679596; fax: +96614679436; e-mail: mmzamzam@yahoo.com

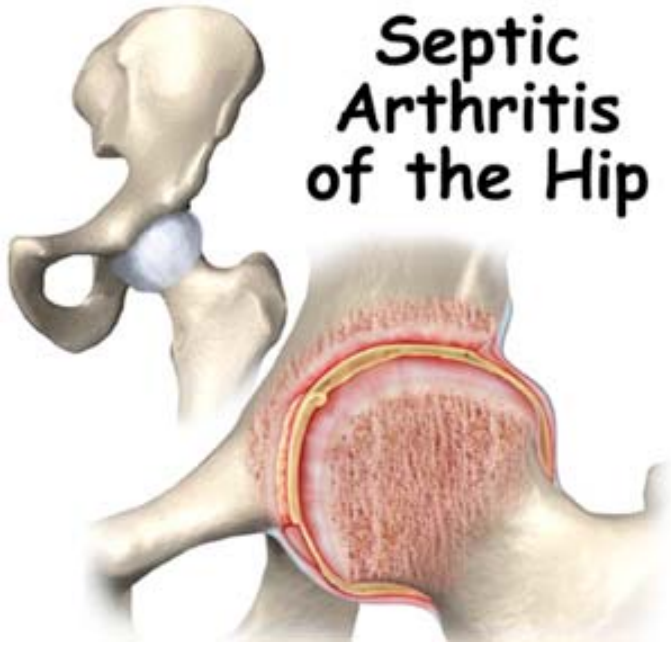
A total of 154 children admitted with septic arthritis ($n=81$) or transient synovitis ($n=73$) were studied retrospectively. Ultrasound findings for 127 patients were correlated with the final diagnosis. Sensitivity, specificity and positive predictive value of ultrasound for the diagnosis of pediatric septic hip were 86.4, 89.7 and 87.9%, respectively.

Table 2 The results of ultrasound (U/S) and the final diagnosis for patients in group II (provisional diagnosis of TS)

	Results of U/S		Final diagnosis	
Direct admission ($n=41$)	TS	$n=39$	TS	$n=33$
			SA	$n=6$
	SA	$n=2$	TS	–
			SA	$n=2$
Delayed admission ($n=34$)	TS	$n=21$	TS	$n=19$
			SA	$n=2$
	SA	$n=13$	TS	$n=2$
			SA	$n=11$

TS, transient synovitis; SA, septic arthritis.

In conclusion, U/S is still the best noninvasive imaging technique for detection and follow-up of hip effusion. Nevertheless, U/S does not help narrow the differential diagnosis of hip effusion to avoid unnecessary aspiration under general anesthesia. The advances in the imaging techniques may improve the capability of U/S to be more sensitive in identifying the nature of hip effusion.



Factors Distinguishing Septic Arthritis from Transient Synovitis of the Hip in Children

A Prospective Study

By Michelle S. Caird, MD, John M. Flynn, MD, Y. Leo Leung, MD, Jennifer E. Millman, BA, Joann G. D'Italia, CWOCN, CRNP, and John P. Dormans, MD

Investigation performed at the Division of Orthopaedics, The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania

The Journal of Bone & Joint Surgery · jbjs.org
Volume 88-A · Number 6 · June 2006

Methods: Over four years, we prospectively collected data on every child (a total of fifty-three) who underwent hip aspiration because of a suspicion of septic arthritis at our institution. Diagnoses of confirmed septic arthritis, presumed septic arthritis, and transient synovitis were determined on the basis of the results of Gram staining, culture, and a cell count of the hip aspirate. Presenting factors and laboratory values were recorded. To evaluate the strength of predictors, we performed univariate and multivariate analysis on data from forty-eight patients who met the inclusion criteria.

TABLE II Summary of Contingency Tables Used for Univariate Analysis

Clinical Predictors	Positive in Patients with Septic Arthritis *(no. [%])*	Negative in Patients with Transient Synovitis *(no. [%])*	Positive in Patients with Transient Synovitis *(no. [%])*	Negative in Patients with Septic Arthritis *(no. [%])*	P Value
Temperature >38.5°C	15 (44)	14 (100)	0 (0)	19 (56)	0.0020
White blood-cell count in serum >12.0 × 10^9/L	17 (50)	10 (71)	4 (29)	17 (50)	0.2135
Erythrocyte sedimentation rate >40 mm/hr	19 (56)	12 (86)	2 (14)	15 (44)	0.0108
Refusal to bear weight	31 (91)	4 (29)	10 (71)	3 (9)	0.1711
C-reactive protein level >20.0 mg/L	29 (85)	10 (71)	4 (29)	5 (15)	0.00027

TABLE IV Predicted Probability of Septic Arthritis

No. of Factors	Septic Arthritis (N = 34) *(no. [%])*	Transient Synovitis (N = 14) *(no. [%])*	Predicted Probability of Septic Arthritis *(%)*	
			Current Study	Study by Kocher et al.[1]
0	1 (3)	3 (21)	16.9	0.2
1	3 (9)	6 (43)	36.7	3
2	3 (9)	2 (14)	62.4	40
3	9 (26)	2 (14)	82.6	93.1
4	15 (44)	1 (7)	93.1	99.6
5	3 (9)	0	97.5	

Akaike's information criterion calculations were used to measure the best model of the data. On the basis of these calculations, we ranked the predictors in the order of their influence on the predicted probability of septic arthritis. Fever of >38.5°C was the most influential predictor; in fact, although some children with transient synovitis had a low-grade fever, no child with transient synovitis had a fever of >38.5°C. A C-reactive protein level of >2.0 mg/dL (>20.0 mg/L) was the next strongest predictor, followed by an erythrocyte sedimentation rate of >40 mm/hr, refusal to bear weight, and a serum white blood-cell count of >12,000/ mm^3 (12.0×10^9/L).

Evidence-Based Orthopaedics

Ibuprofen Shortened Time to Symptom Resolution in Children with Transient Synovitis of the Hip

Kermond S, Fink M, Graham K, Carlin JB, Barnett P. A Randomized Clinical Trial: Should the Child with Transient Synovitis of the Hip Be Treated with Nonsteroidal Anti-Inflammatory Drugs? Ann Emerg Med. 2002 Sep;40:294-9.

Design: Randomized (allocation concealed), blinded (clinicians, patients, and outcome assessors), controlled trial with follow-up to 7 days or to symptom resolution.

Intervention: Patients were allocated to ibuprofen syrup, 10 mg/kg, 3 times per day for 5 days (n = 17) or placebo syrup (n = 19). All patients were advised to take paracetamol (acetaminophen) for pain relief.

Ibuprofen vs placebo for children with transient synovitis of the hip			
Outcome	Ibuprofen	Placebo	P Value
Median duration of symptoms (days)	2	4.5	0.05

Conclusions: In children with transient synovitis of the hip, ibuprofen relieved symptoms sooner than did placebo.