

Justification du Traitement Chirurgical des Hanches

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Justification du

Traitement Chirurgical des Hanches

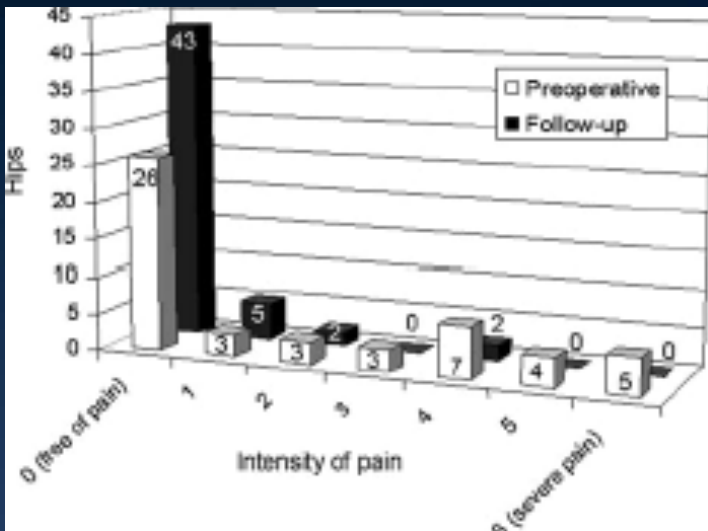
Qualité de Vie et Résultats globaux
Facteurs de Risque de déplacement des Hanches
Evolution Spontanée

Chirurgie isolée des parties molles
Le coup de vent
Chirurgie uni versus bilatérale

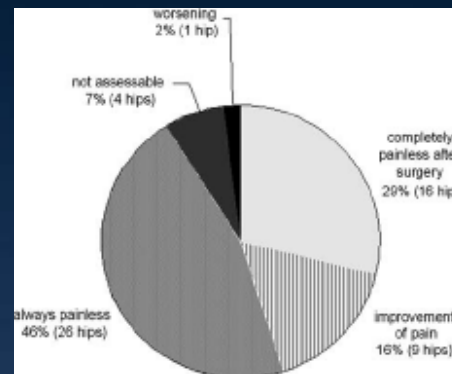
Chirurgie chez le sujet ambulatant

Chirurgie de Sauvetage

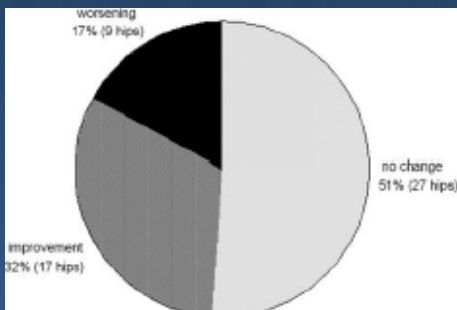
L'interface Pelvien



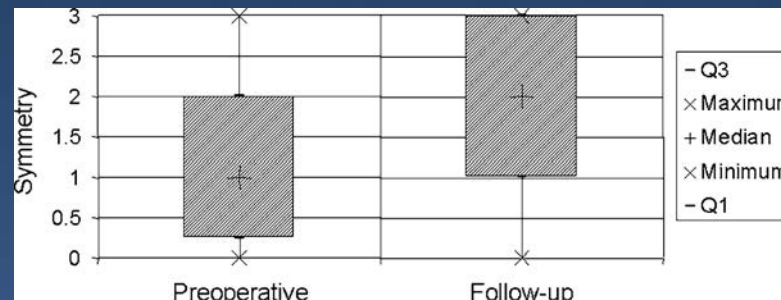
Intensity of pain preoperatively and at follow-up



Improvement of pain



Symmetry of lying at follow-up



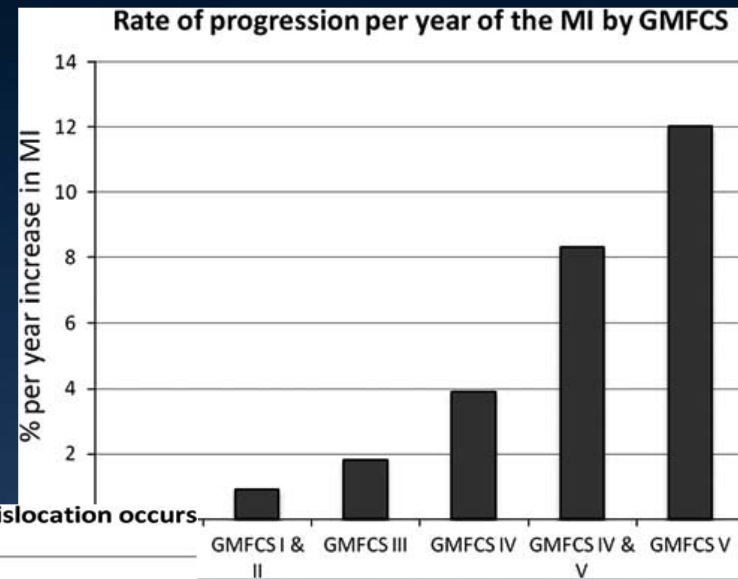
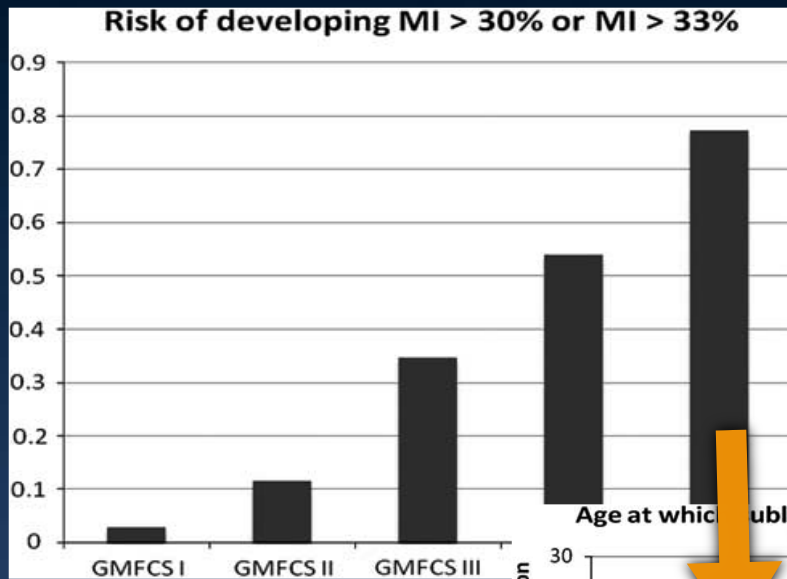
Symmetry of sitting.

0 = asymmetric, 3 = good symmetry.

Q1 = 25th percentile, Q3 = 75th percentile

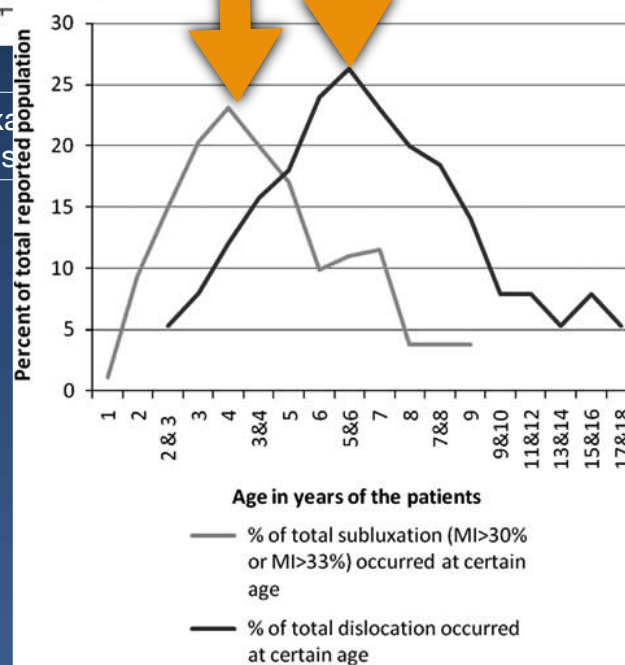
Krebs A, Strobl WM, Grill F.

Neurogenic hip dislocation in cerebral palsy: **quality of life and results after hip reconstruction.**
 J Child Orthop. 2008 Mar;2(2):125-31.



Risk of developing hip subluxation or dislocation by GMFCS (1 = 100% risk of subluxation)

Rate of progression of hip subluxation by GMFCS (expressed as % migration per year change)



Percent of the total population reaching the subluxation or dislocation category

Pruszczynski B, Sees J, Miller F.
Risk Factors for Hip Displacement in Children With Cerebral Palsy: Systematic Review.
 J Pediatr Orthop Part B. 2016 Dec;36(8):829–33.

Recommandations
 FREQUENCE de SURVEILLANCE du DEPLACEMENT RADIOGRAPHIQUE des HANCHES
 chez les Enfants atteints de Paralyse Cérébrale



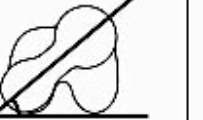


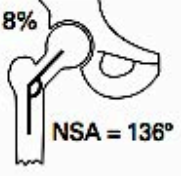
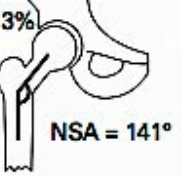
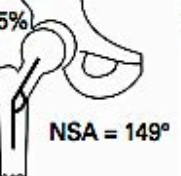
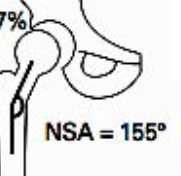
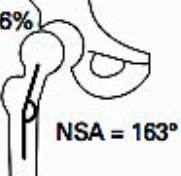
	Age 2-8 Ans	Age 8-18 Ans
GMFCS I,II	Une seule radiographie	Pas de radiographie
GMFCS I,II (Index migration >30%)	Radiographie annuelle	Tous les 2 Ans
GMFCS III ,IV ,V	Annuelle	Tous les 2 Ans
GMFCS III ,IV ,V (Index migration >30%)	Tous les 6 Mois	Annuelle

Pruszczynski B, Sees J, Miller F.

Risk Factors for Hip Displacement in Children With Cerebral Palsy: Systematic Review.
 J Pediatr Orthop Part B. 2016 Dec;36(8):829–33.

Proximal Femoral geometry in cerebral palsy



	GMFCS I	GMFCS II	GMFCS III	GMFCS IV	GMFCS V
FNA	 FNA = 30°	 FNA = 36°	 FNA = 40°	 FNA = 40°	 FNA = 40°
NSA + MP	 MP = 8% NSA = 136°	 MP = 13% NSA = 141°	 MP = 25% NSA = 149°	 MP = 37% NSA = 155°	 MP = 46% NSA = 163°

Robin J. , Kerr Graham H. 2008

Tetraparésie spastique Evolution spontanée d'une subluxation de hanche



Tetraparésie spastique
**Evolution spontanée
d'une subluxation de hanche**



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6A 6M

Tetraparesie spastique

Limitation de l'abduction

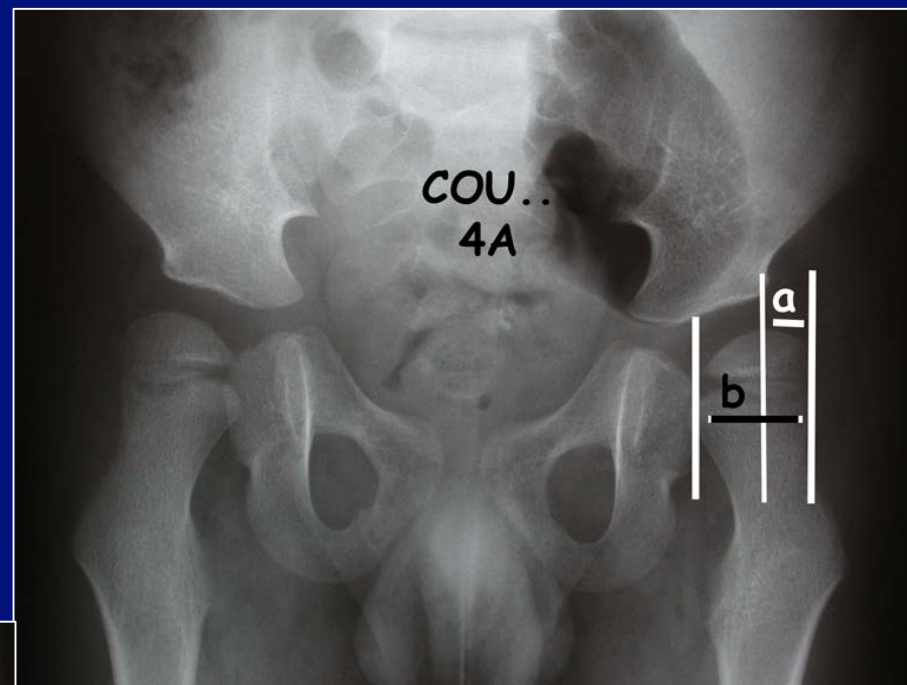
Hanches à risque



5A Après libération

bilatérale

des **adducteurs**



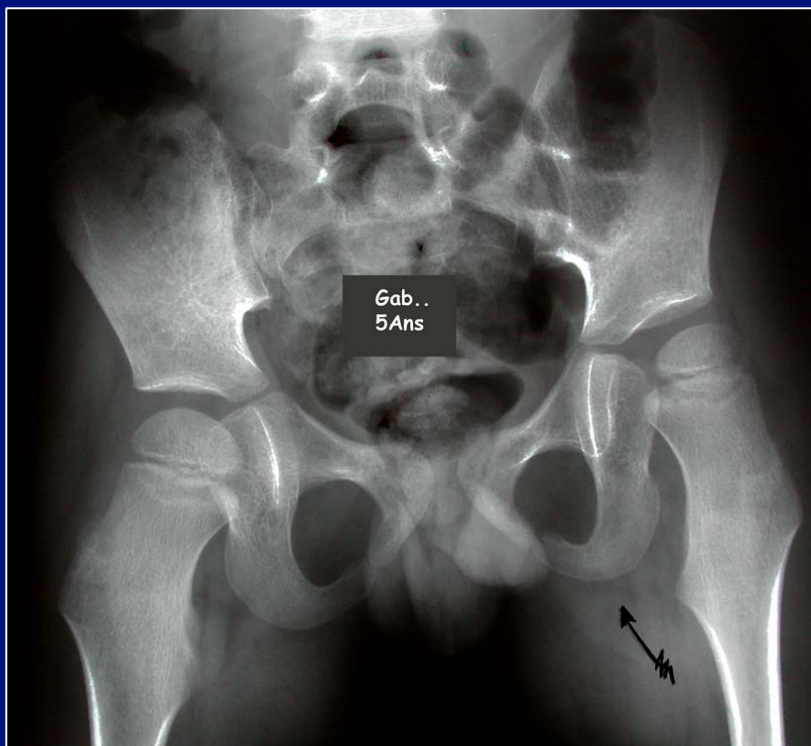
TETRAPARESIE IMC

Adductum des cuisses

Abd. Flex. 20 10

Abd. Ext. 15 5

Traitement chirurgical à 4A Add.
Longus, gracilis et son nerf



5A Diplegique spastique à predominance gauche

Coup de vent vers la droite **Attitude vicieuse du MIG :**

flex. Add. de la HG flex. du genou

Abd flex 60 15

Abd ext 30 5

Flexum Hanche 10 30

Flexum Genou 10 40



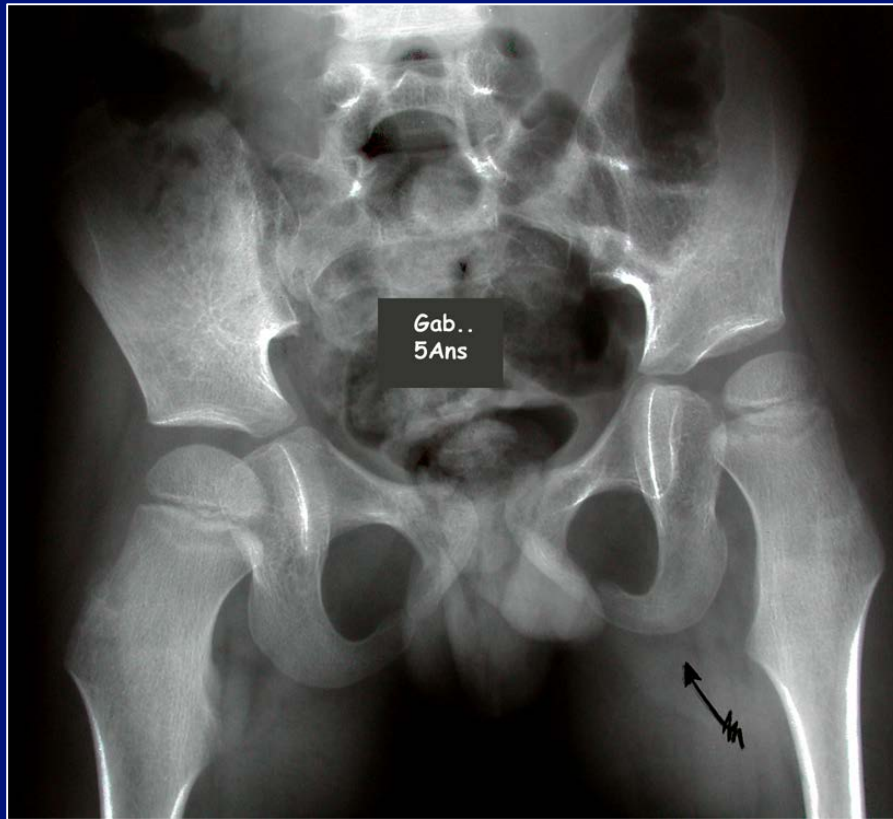
2A Postop

Traitement chirurgical:

Add. Longus, Gracilis

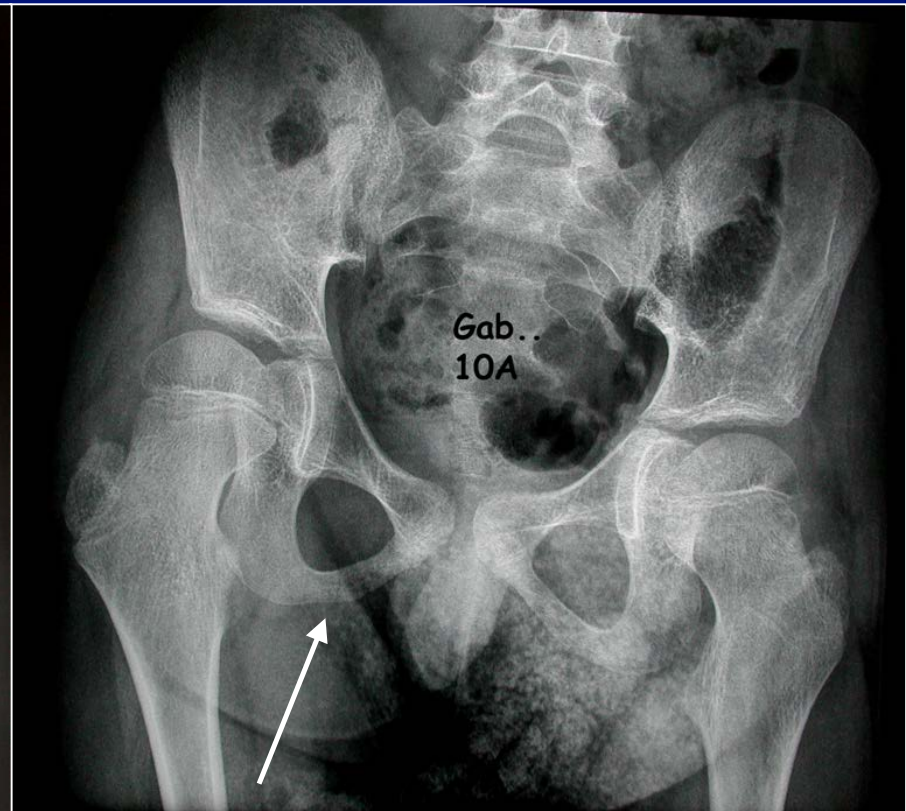
Psoas

IJ Internes



5A Coup de vent à droite

Libération parties molles à gauche

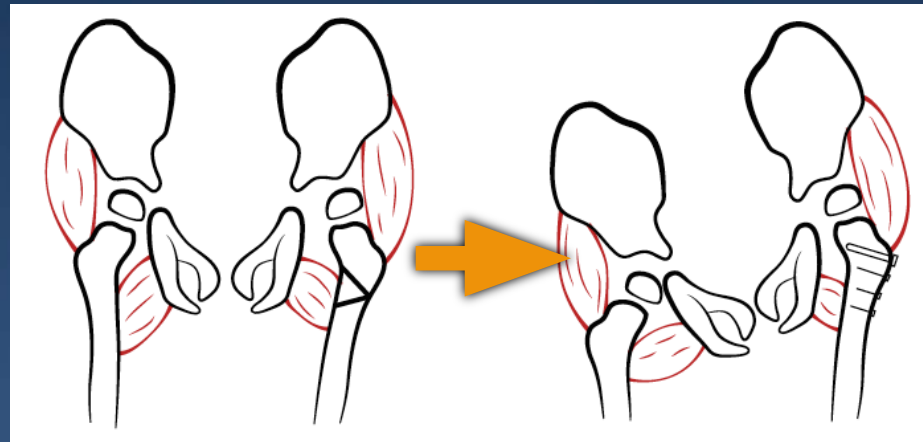
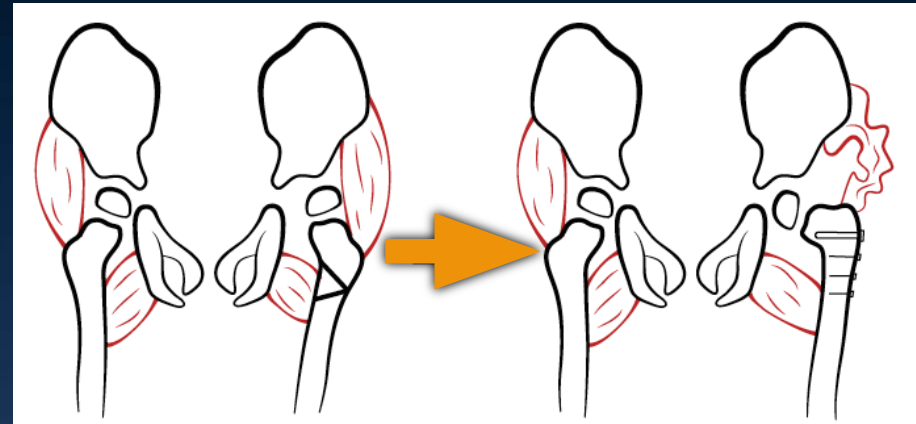
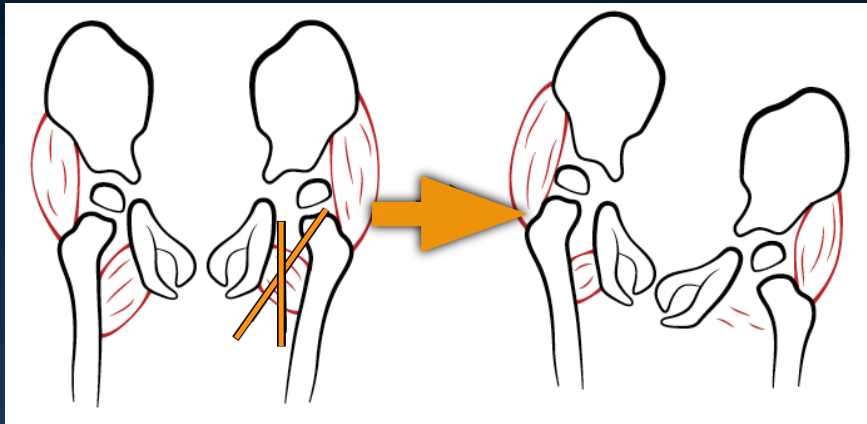


10A Coup de vent à gauche

Inversion de l'obliquité pelvienne
Abd flex 20 70

Abd ext 5 35

---Libération add. à droite



Larsson M, Hägglund G, Wagner P.

Unilateral varus osteotomy of the proximal femur in children with cerebral palsy:

a five-year follow-up of the development of both hips.

J Child Orthop. 2012 Apr 26;6(2):145–51.



Predictors of contralateral hip subluxation included lack of contralateral soft-tissue release, reversal of pelvic obliquity angle, and larger initial contralateral hip FMI (>25%).

Shukla PY, Mann S, Braun SV, Gholve PA.

Unilateral hip reconstruction in children with cerebral palsy: predictors for failure.
J Pediatr Orthop Part B. 2013 Mar;33(2):175–81.

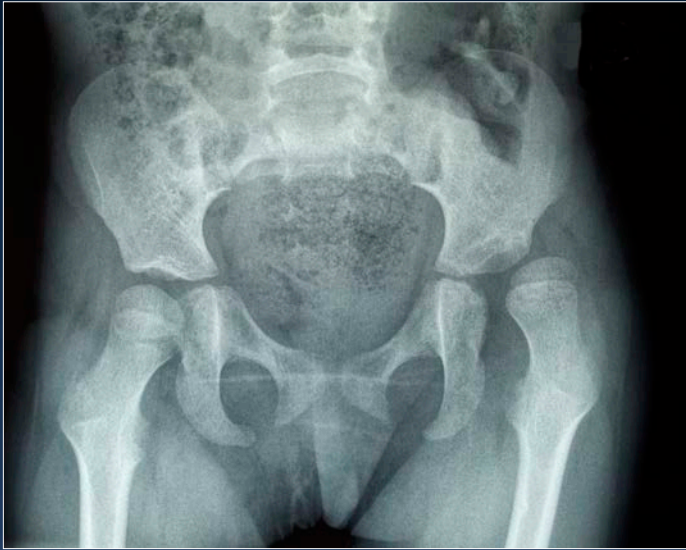
Some authors recommend bilateral osteotomy in children with unilateral displacement. However, Owers et al. presented a series of 30 children with WS who were treated with bilateral femoral osteotomy and soft tissue release to gain symmetry. At the 3-year follow-up, 44 % of the children had a WS deformity compared with 50 % preoperatively. Thus, ***it is uncertain whether bilateral femoral osteotomy reduces the long-term risk of developing WS.***

Early treatment of scoliosis might reduce the development of pelvic obliquity and WS. With improved knowledge of the risk factors for progression and new surgical techniques that allow for further growth, this might be one way to reduce WS in the future.

In conclusion, ***WS is a severe problem***, affecting about one-third of children with CP at GMFCS levels III–V. In most children, WS develops before 10 years of age, but the risk continues up to 20 years of age. With early inclusion in a hip surveillance program, and early treatment of contractures, the frequency of WS starting in the lower extremities can be reduced.

Hägglund G, Lauge-Pedersen H, Persson Bunke M, Rodby-Bousquet E.

Windswept hip deformity in children with cerebral palsy: a population-based prospective follow-up. J Child Orthop. Springer Berlin Heidelberg; 2016 Aug;10(4):275–9.



6A



8A



10A

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7ANS



11ANS

DIPLEGIQUE ASYMETRIQUE

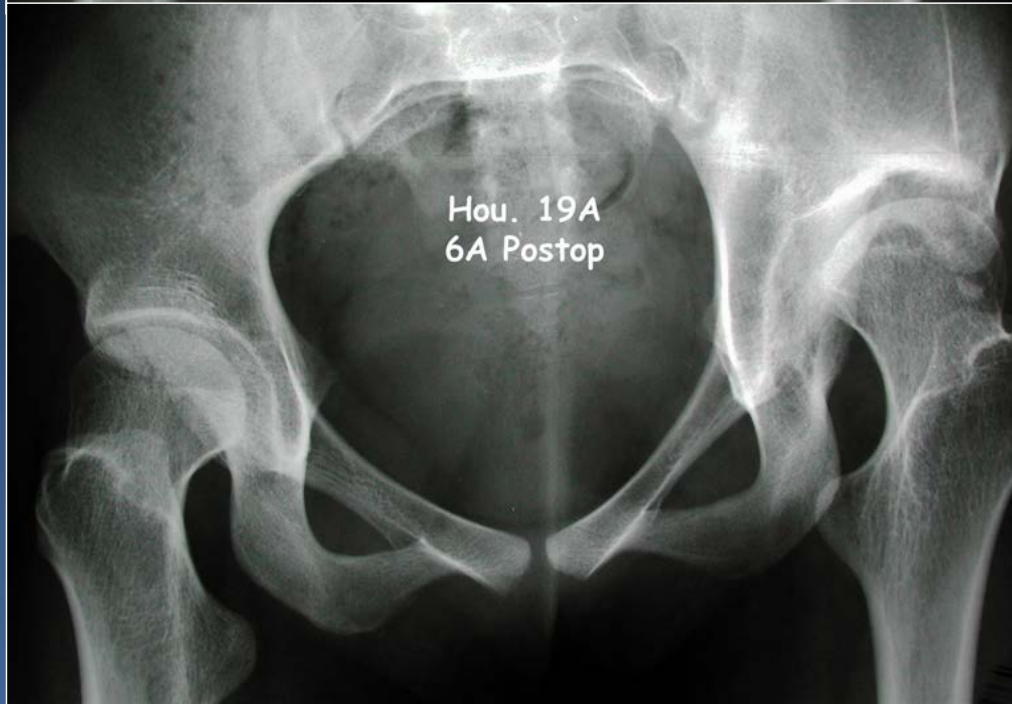
HANCHE GAUCHE MENACEE :

Attitude vicieuse évolutive en adduction avec subluxation....

13Ans



L'ostéotomie de medialisation de Chiari sur une hanche mature couvre la tête fémorale quand il y a dysplasie globale avec *incongruence* entre l'acetabulum et la tête du fémur

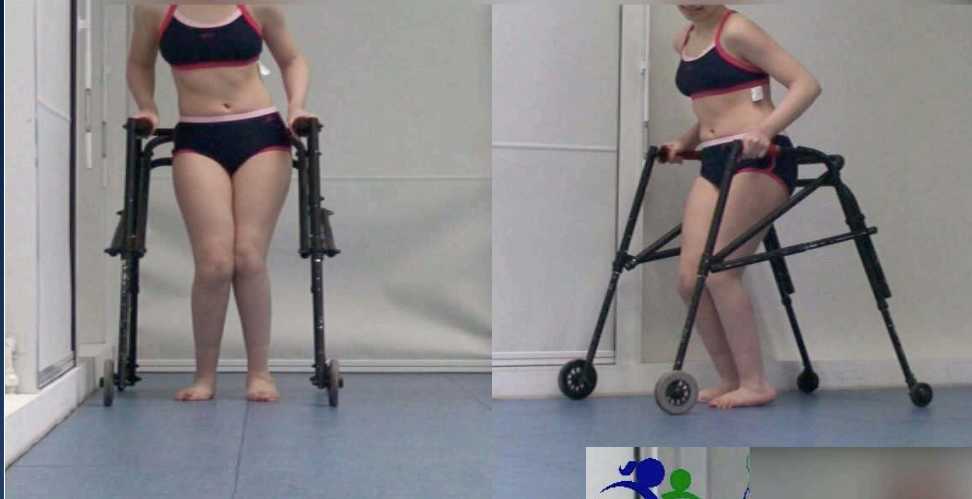


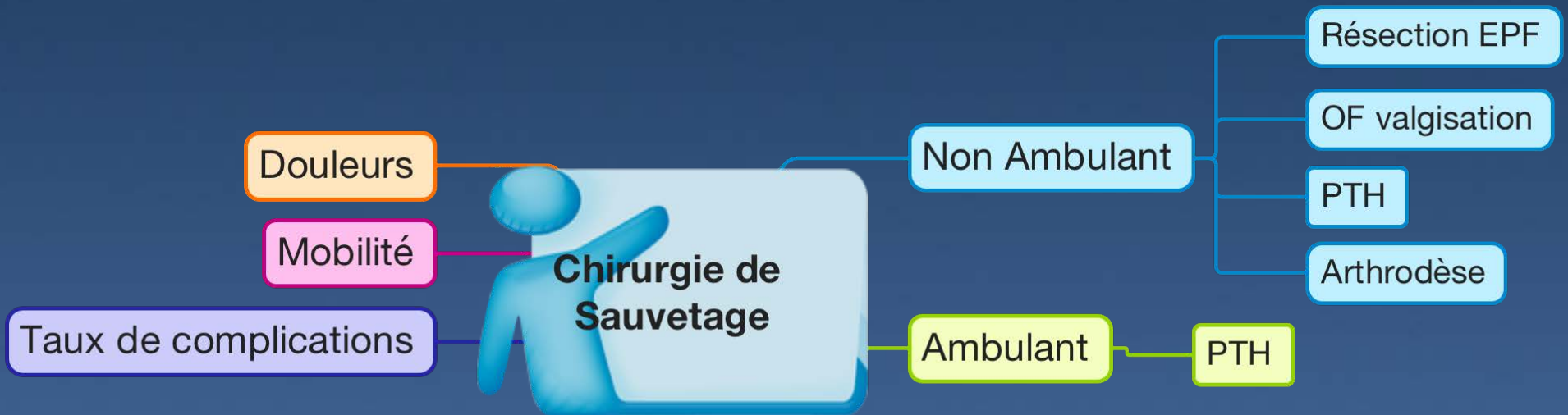
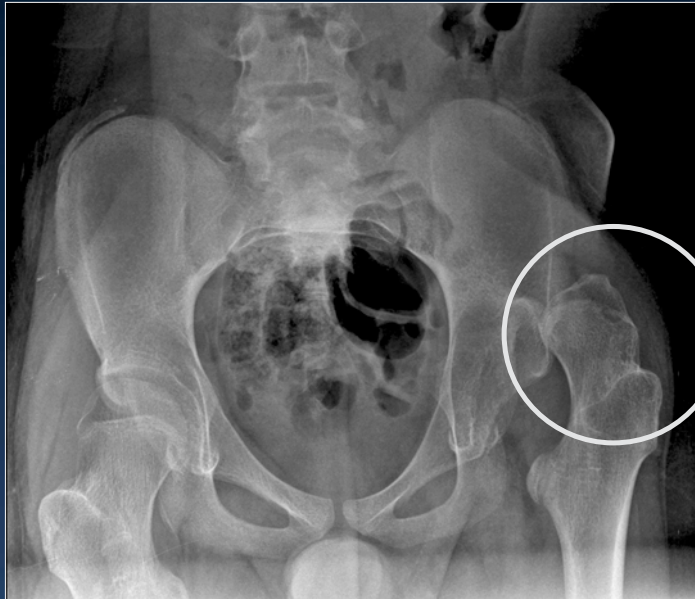
19Ans



Diplégique asymétrique 14A

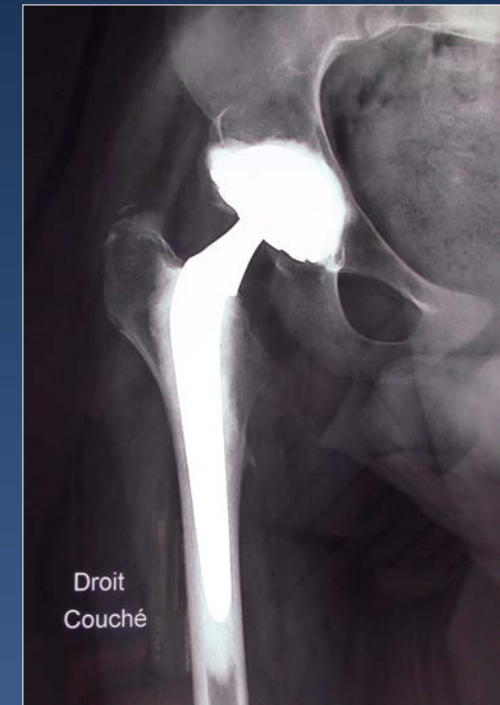








13y spastic tetraplegia
add flex deformity
hip pain



Obliquité Pelvienne...
Coup de vent des Membres Inférieurs...

Pelvic Obliquity...
Windswept deformity...

Bassin Oblique: déformation *tridimensionnelle* entre le rachis et les MI
Concept de *vertèbre pelvienne* ou intercalaire (J.Dubousset 1972)

Obliquité infra pelvienne

Les rétractions et déformations des hanches *coup de vent* déplacent le bassin

Infrapelvic obliquity

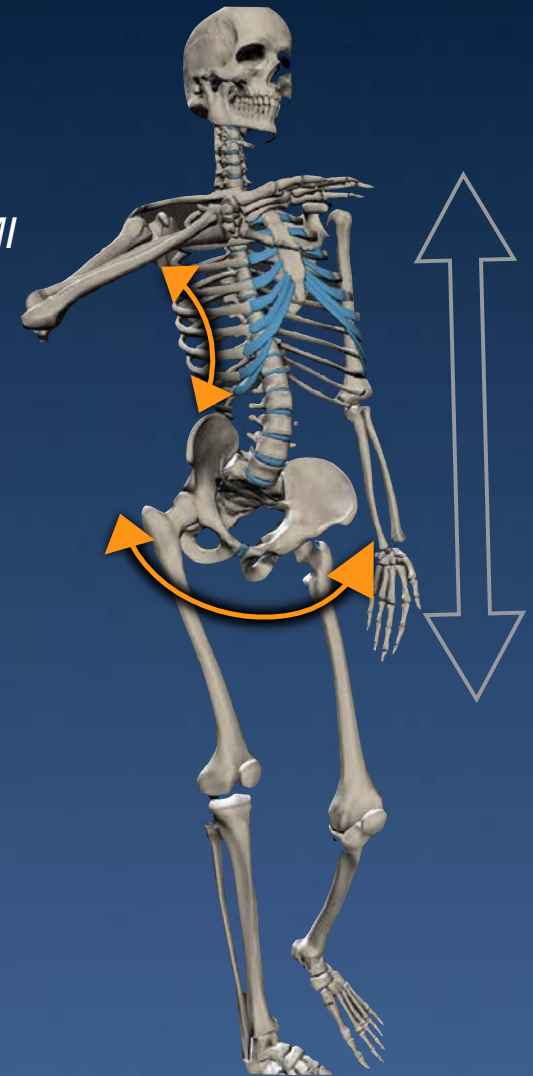
Obliquité supra pelvienne

La déformation rachidienne est la cause du BO

Suprapelvic obliquity

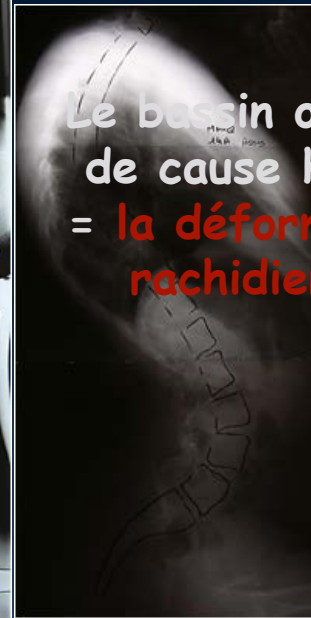
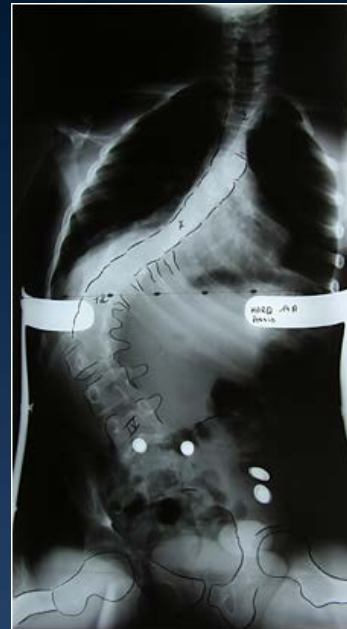
Obliquité infra et supra pelvienne (mixte)

Infrapelvic and suprapelvic obliquity





Cerebral palsy
Spastic Tetraparesia
14y



Le bassin oblique
de cause haute
= la déformation
rachidienne

Suprapelvic obliquity



Infrapelvic obliquity

Le bassin oblique
de cause basse
= l'attitude vicieuse
des hanches



Traiter d'abord
la scoliose



puis
Traiter les
hanches



14A



19 Ans





Schema idéal
mais
que faire ?

si le patient est encore
trop jeune

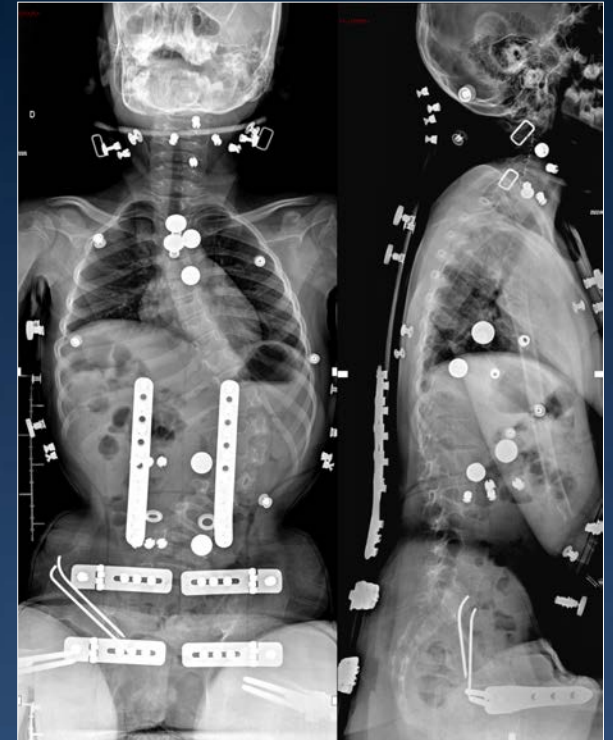
la Déformation
rachidienne est
évolutive

le Terrain médical est
défavorable

le Traitement
orthopédique d'attente
difficile à réaliser et de
plus **inefficace**



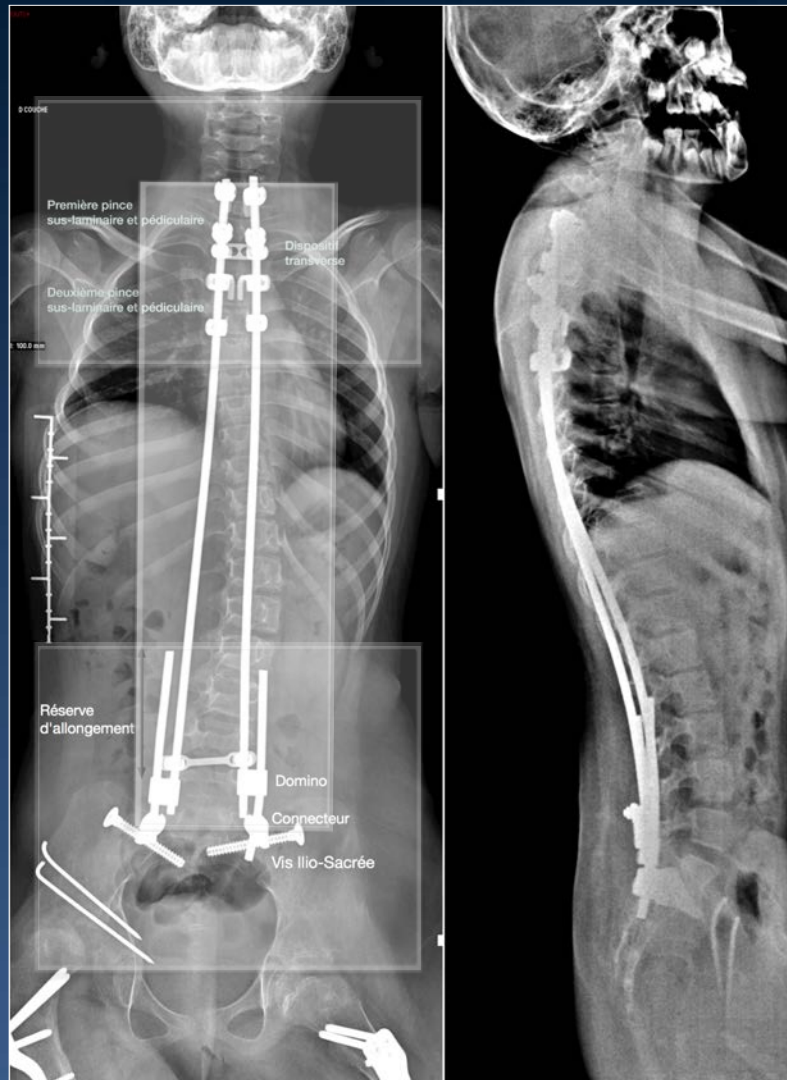
Total body involvement
10y



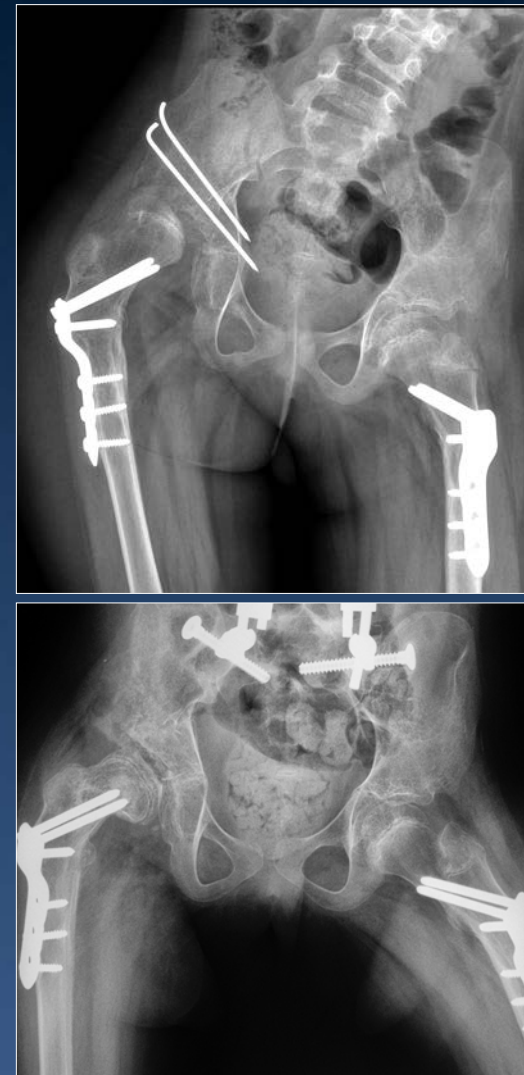
Sitting with CTLSSO



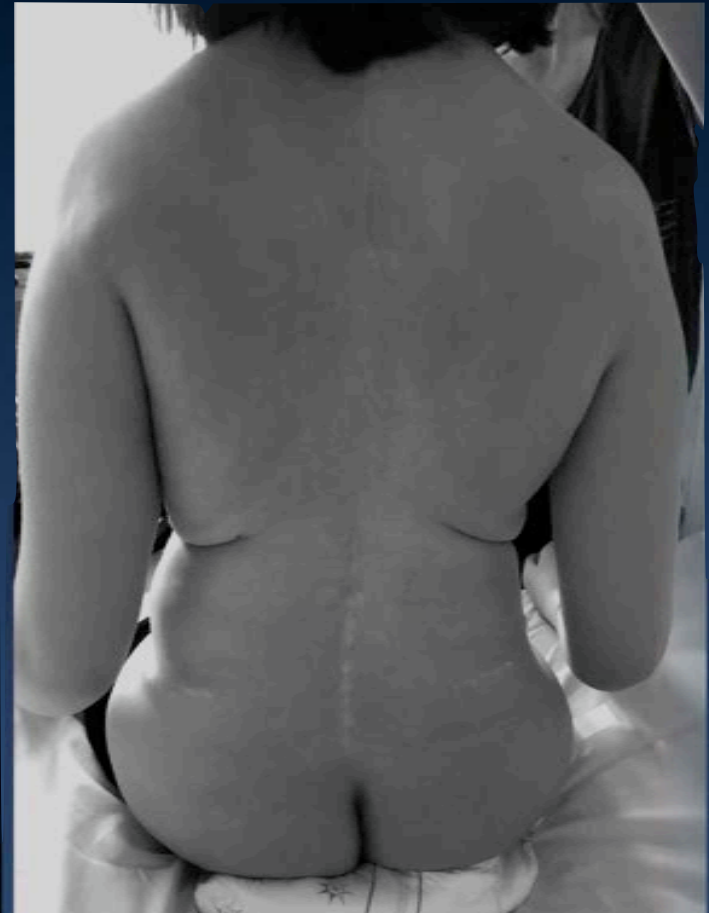
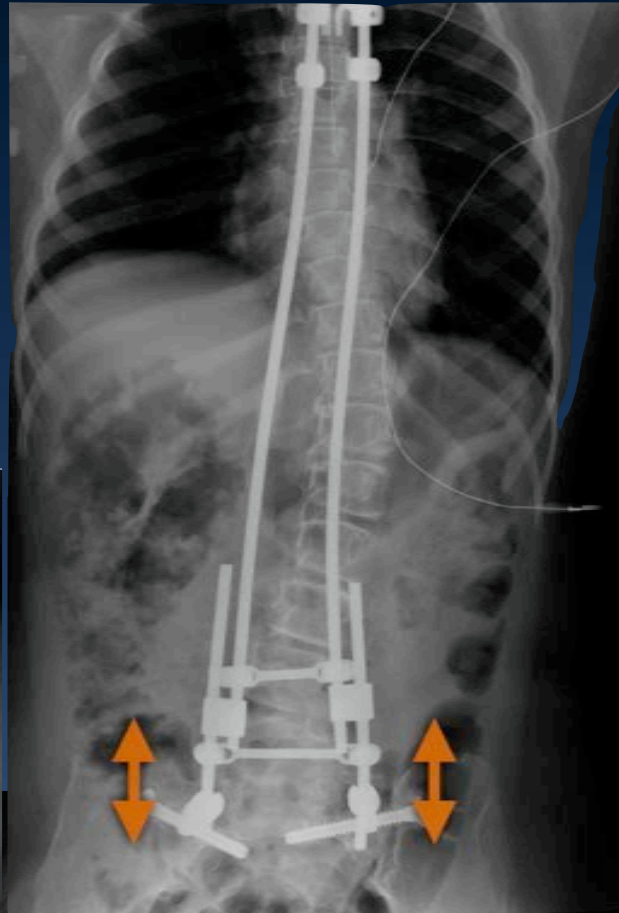
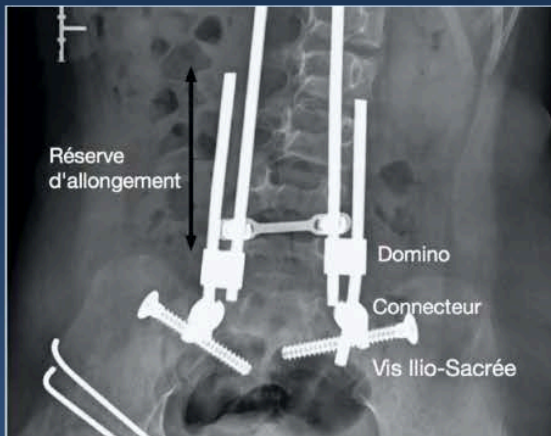
Del...



Initial procedure



Then revision surgery of the right hip

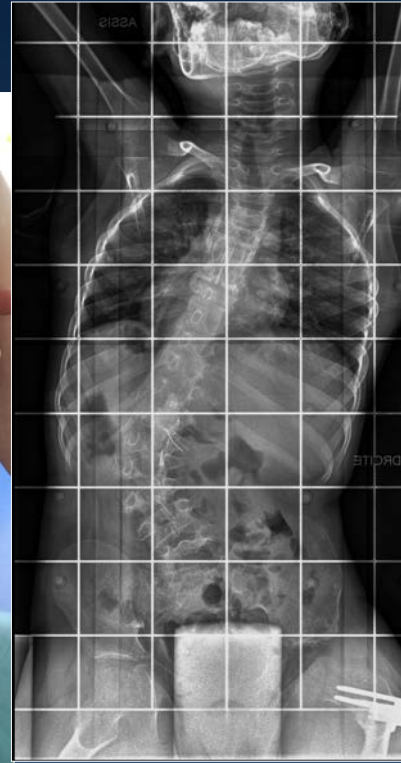


First Lengthening

Del...

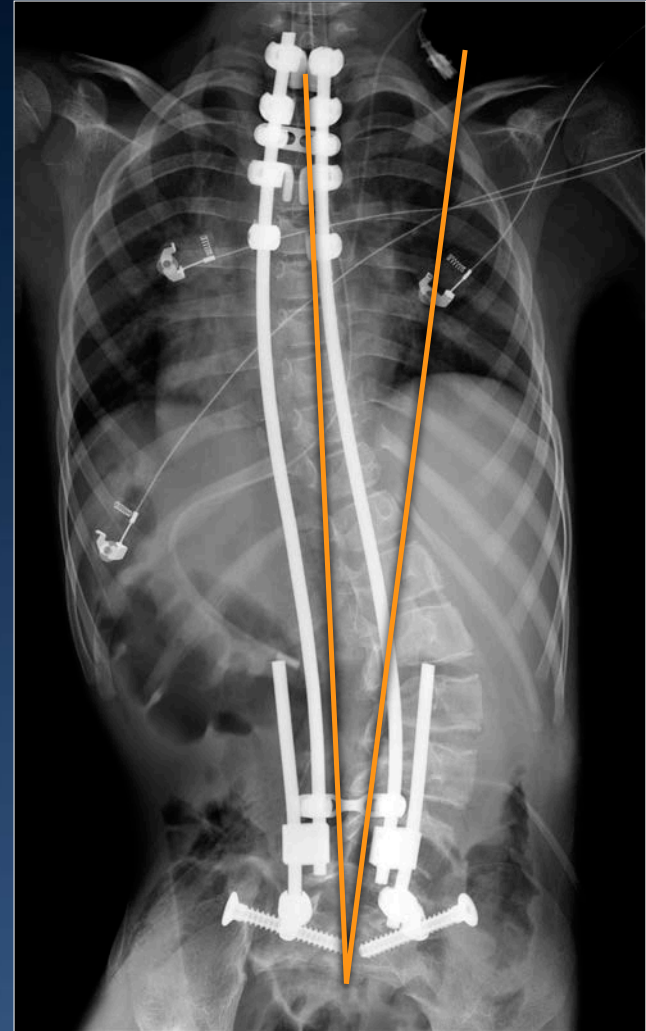


Spastic Tetraplegia
8y

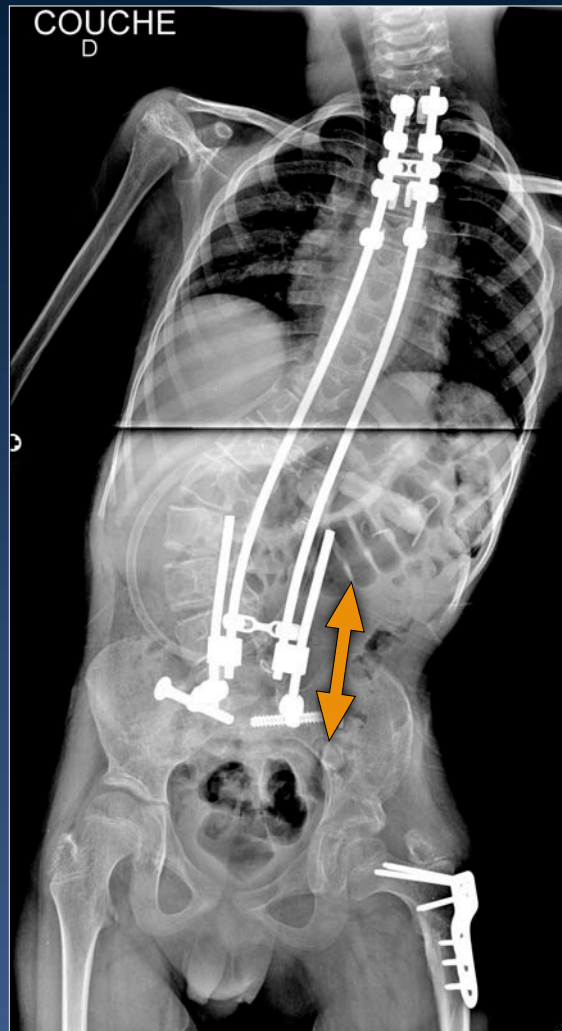


Spastic Tetraplegia
9y



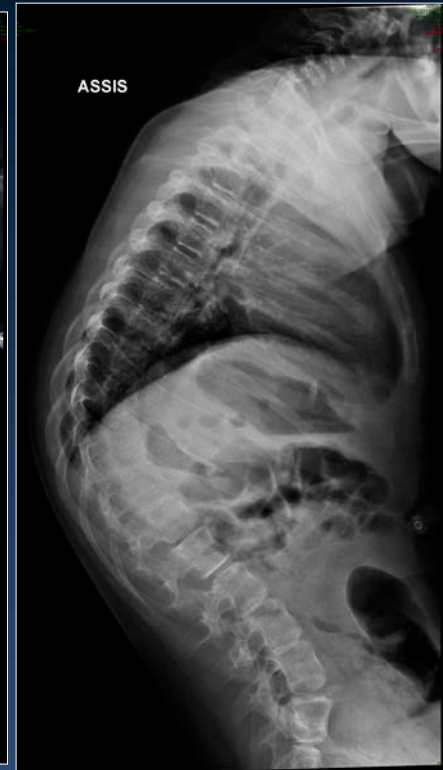


Tétraparésie centrale
10A

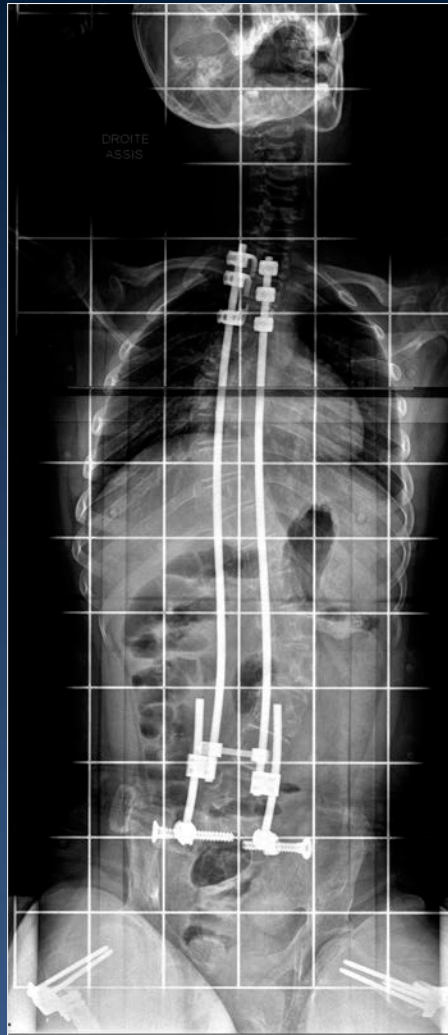
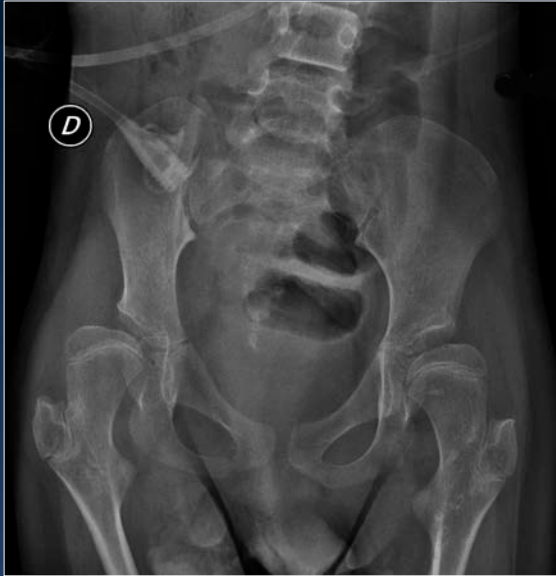




11A



Oh...



Oh...

Recul de 3 Ans

14 enfants âgés de 8 à 12A

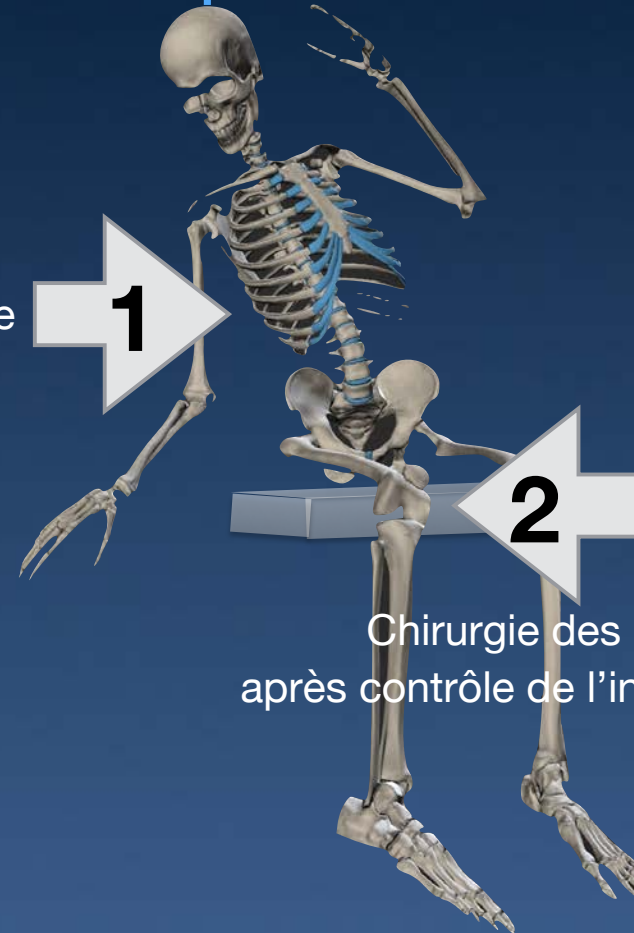
- Obliquité pelvienne 28° en moyenne 5°
à la faveur des retensions asymétriques.
- Hanches stabilisées sans attitudes vicieuses
et mobiles autorisant la station assise
avec un bassin et un tronc équilibrés.
- Correction de la dysplasie de hanches maintenue.
- 2 sepsis rachidiens.

L'interface pelvien chez l'enfant à handicap neurologique en 2016

Evolution du concept...



Instrumentation Rachidienne
Evolutive Mini invasive



Chirurgie des hanches
après contrôle de l'interface pelvien

La chirurgie précoce du rachis par instrumentation évolutive étendue jusqu'au bassin sans arthrodèse permet une bonne gestion de l'interface pelvien pour traiter au mieux les attitudes vicieuses de hanche

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