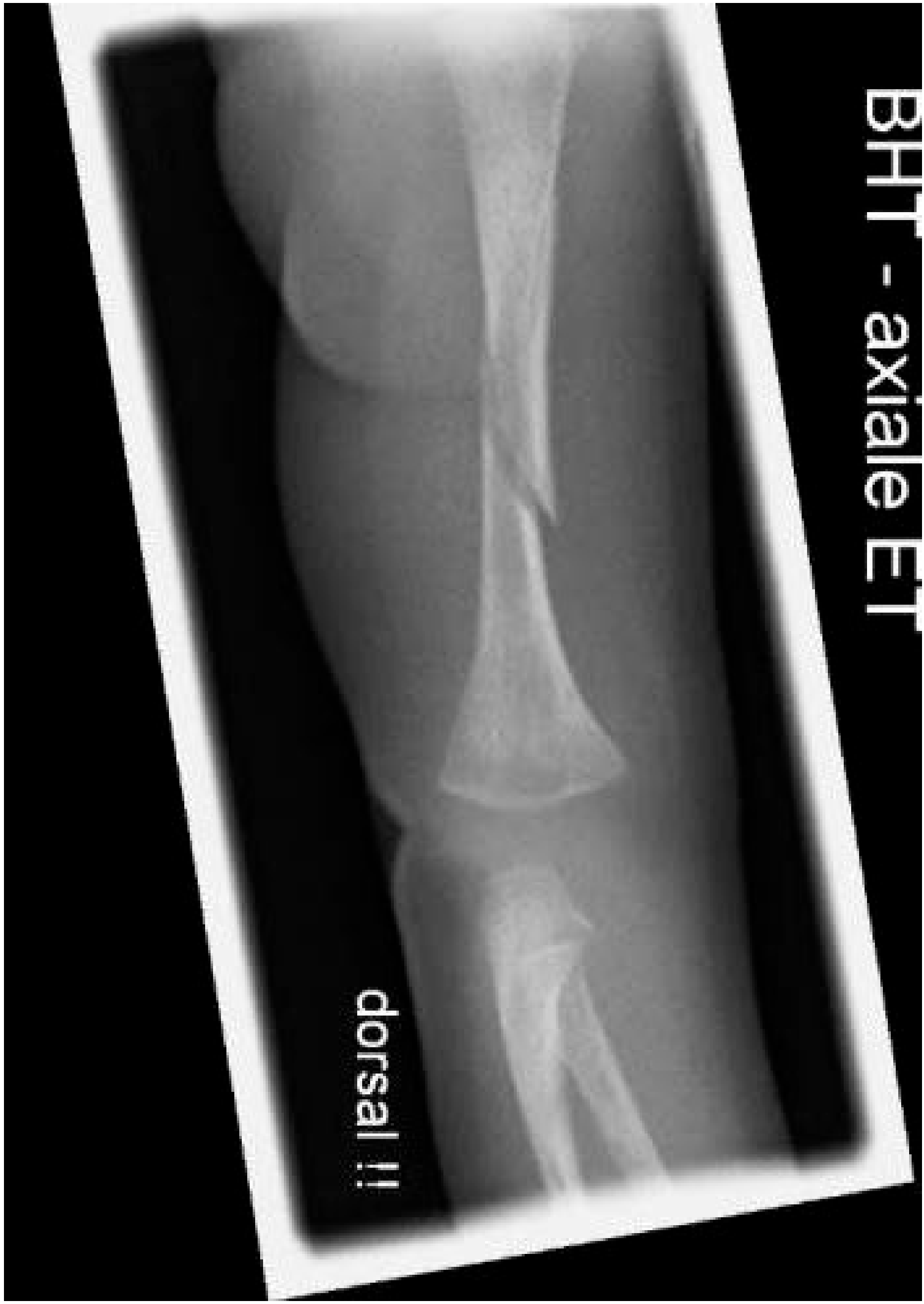
Therapie neonataler Frakturen

Dr. Peter Knorr

Kinderchirurgische Klinik

Universitätsklinikum Augsburg


BHT - axiale ET
dorsal !!

Ursachenfindung

- Intrinsische Faktoren
  - Stoffwechselstörungen des Knochens (Calciumstoffwechsel)
  - Genetische Aberrationen der Kollagen-Biosynthese (Osteogenese imperfecta)
- Extrinsische Faktoren
  - Geburtstraumatisch (sowohl vaginale Entbindung/Sectio)
  - Postnatal traumatisch

Hohe psychische Belastungskomponente

- Wann?
- Wer?
- Warum?
- Vorwürfe
- Fehlendes gegenseitiges Vertrauen

- Sowohl im ärztlichen/pflegerischen Bereich als auch bei den Eltern

- Juristische Konsequenzen

Frakturheilung

- Schnelle Frakturheilung
    - Je jünger, umso schneller
- Hohes Korrekturpotential bei primärer Fehlstellung
    - Hochaktive Wachstumsfugen
    - Umbaumechanismen durch schnelle Kallusbildung

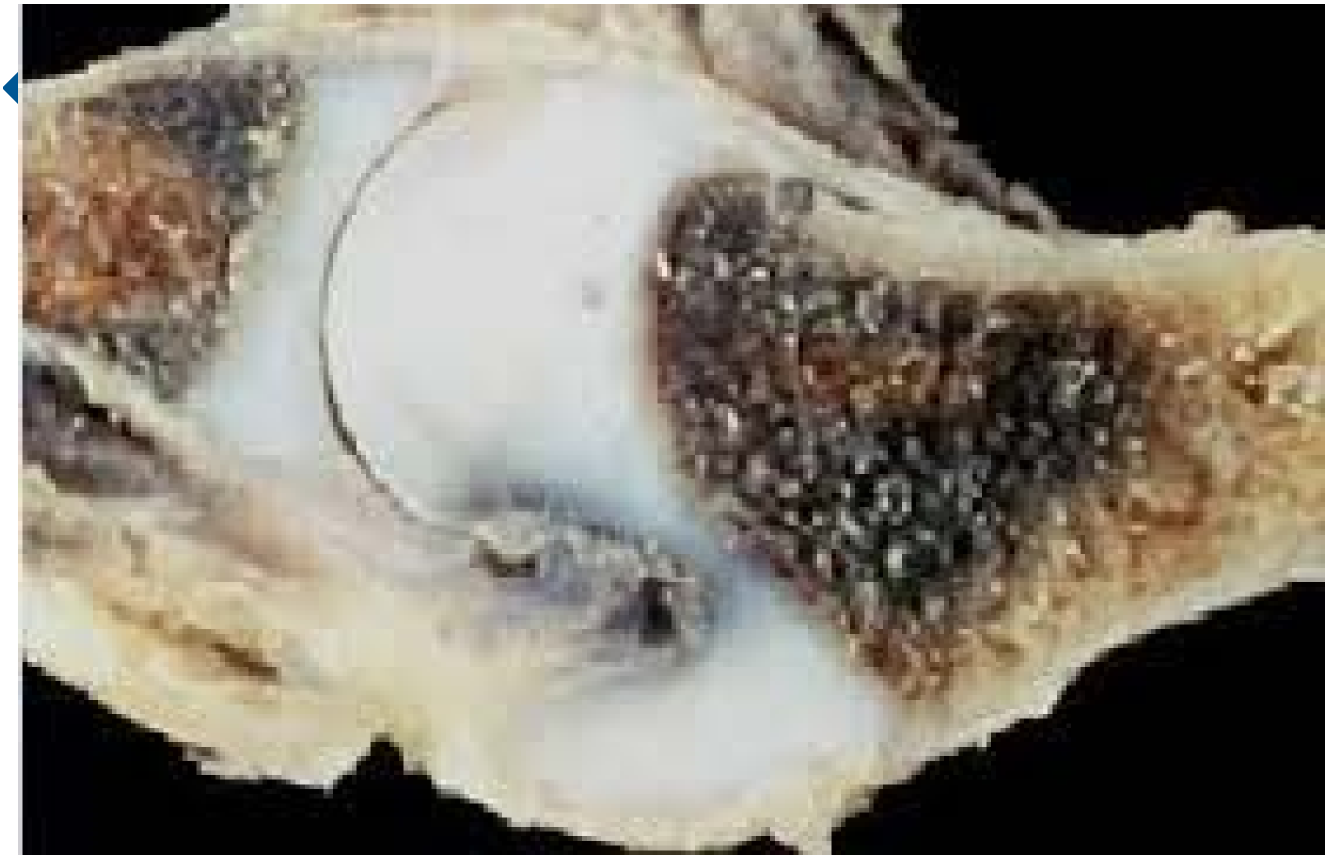
- Nahezu immer konservative Therapie
- Meist folgenlose Ausheilung

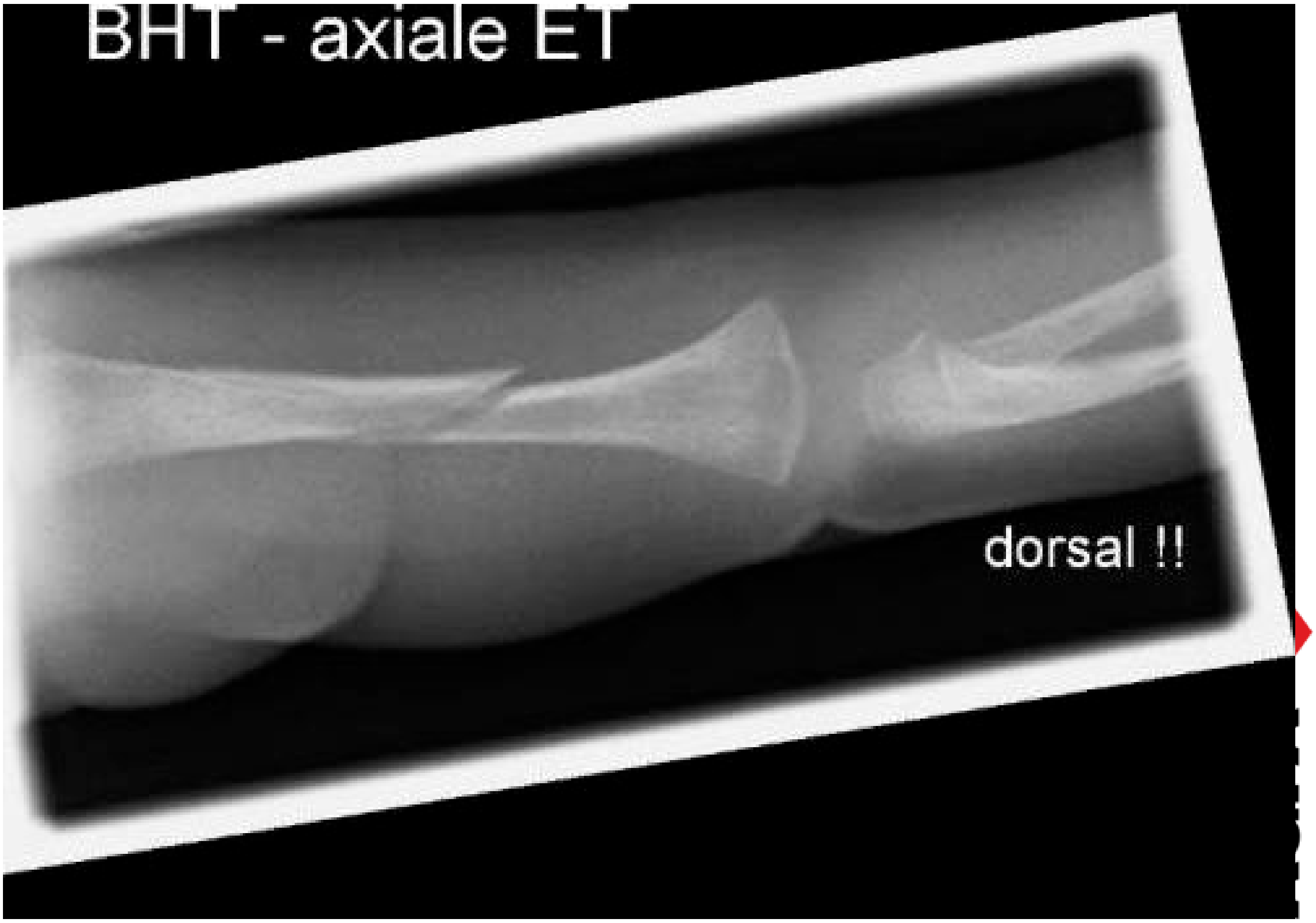
Diagnostik

- Klinik (cave z.B. Clavicula/Humerusfraktur versus Läsion Plexus brachialis

- Röntgen
  - Geringe Mineralisierung
  - Gelenknahe Regionen nicht röntgendichter Knorpel

  - Sonografie
  - MRT

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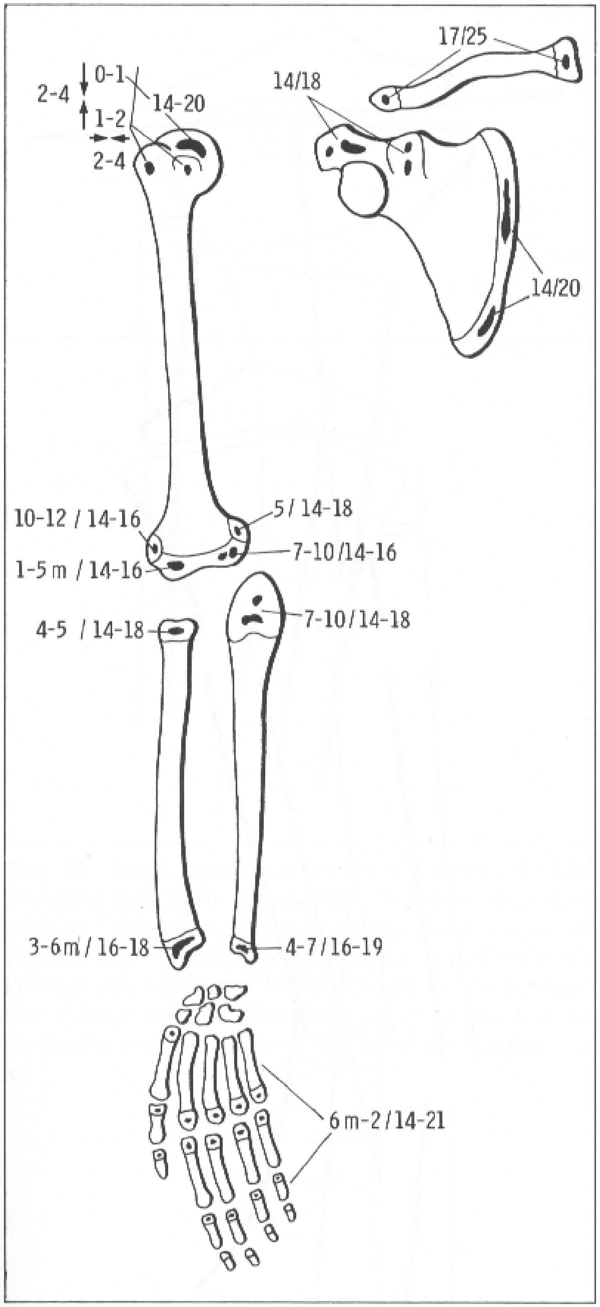
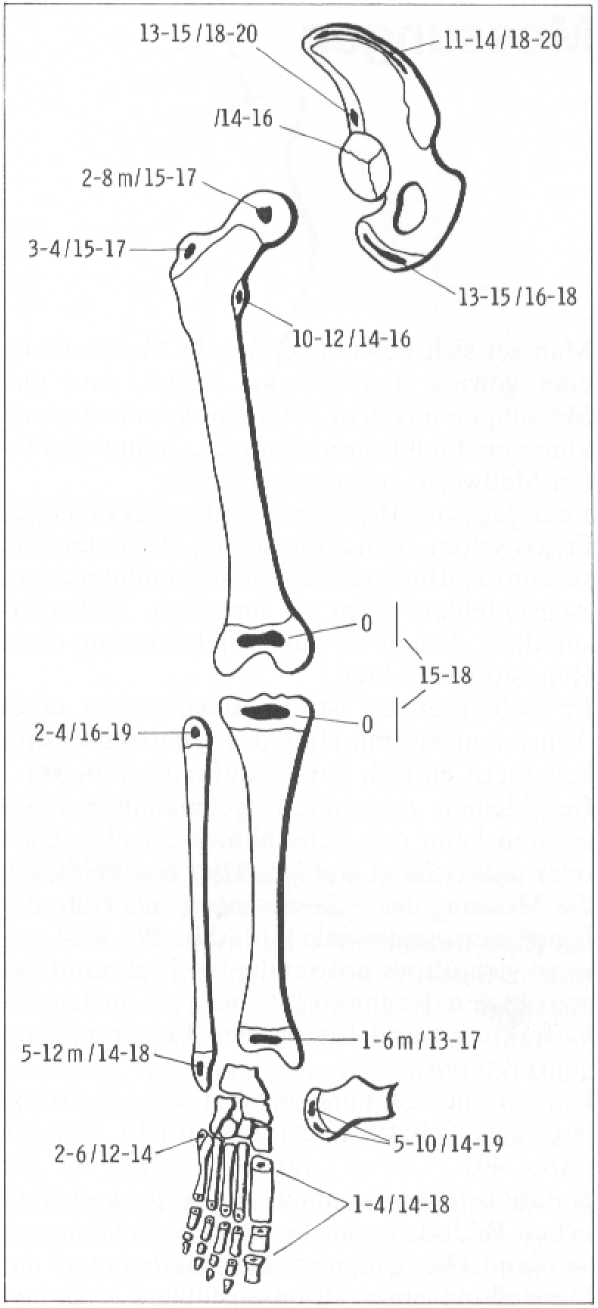

17/25
14/18
0-1
2-4
14-20
1-2
2-4
14/20
10-12 / 14-16
5 / 14-18
7-10 /14-16
1-5 m / 14-16
4-5 / 14-18
7-10 / 14-18
3-6 m / 16-18
4-7 / 16-19
6 m-2 / 14-21


13-15 / 18-20
11-14 / 18-20
/14-16
2-8 m / 15-17
3-4 / 15-17
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10-12 / 14-16
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15-18
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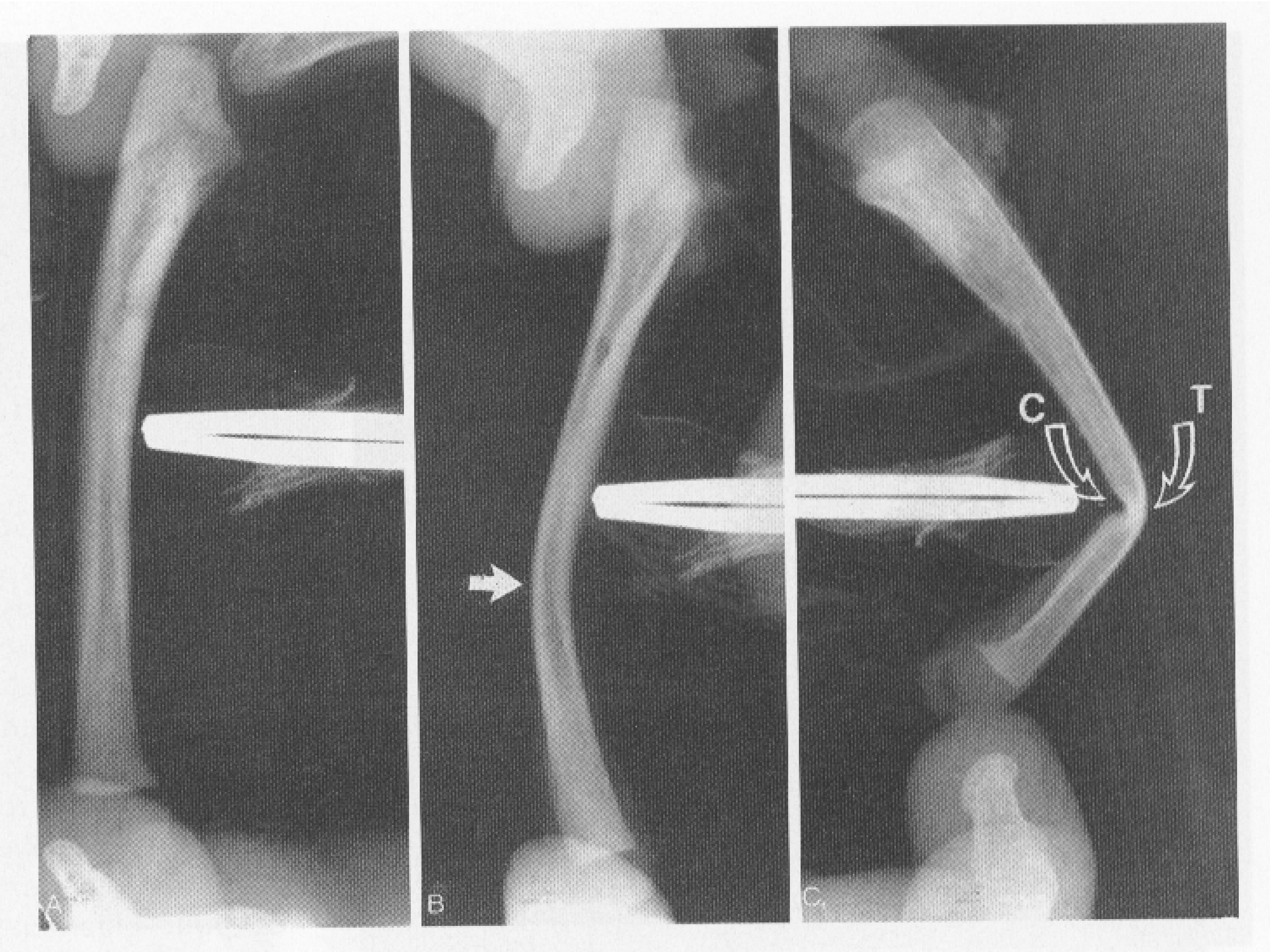
1-4 / 14-18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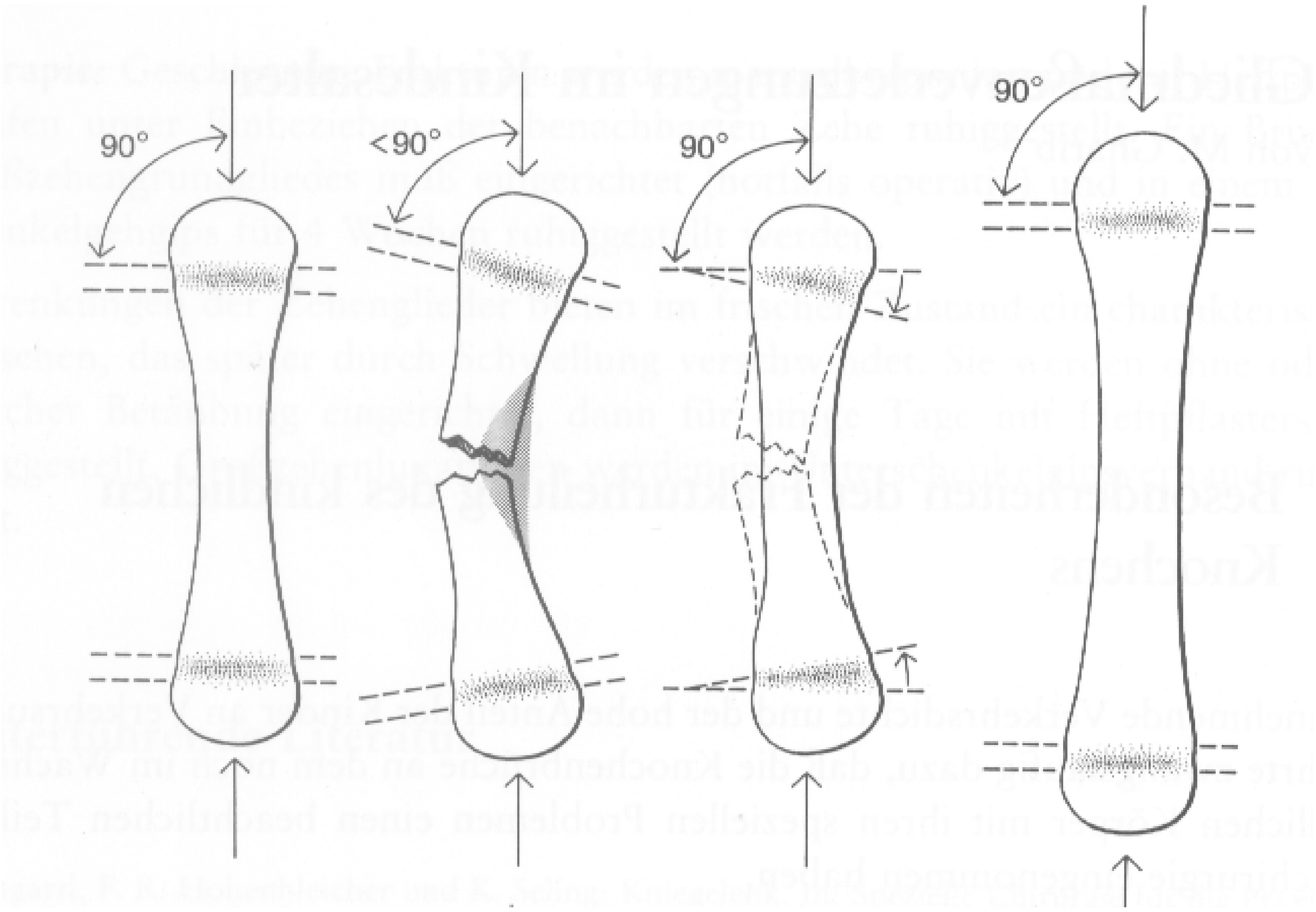
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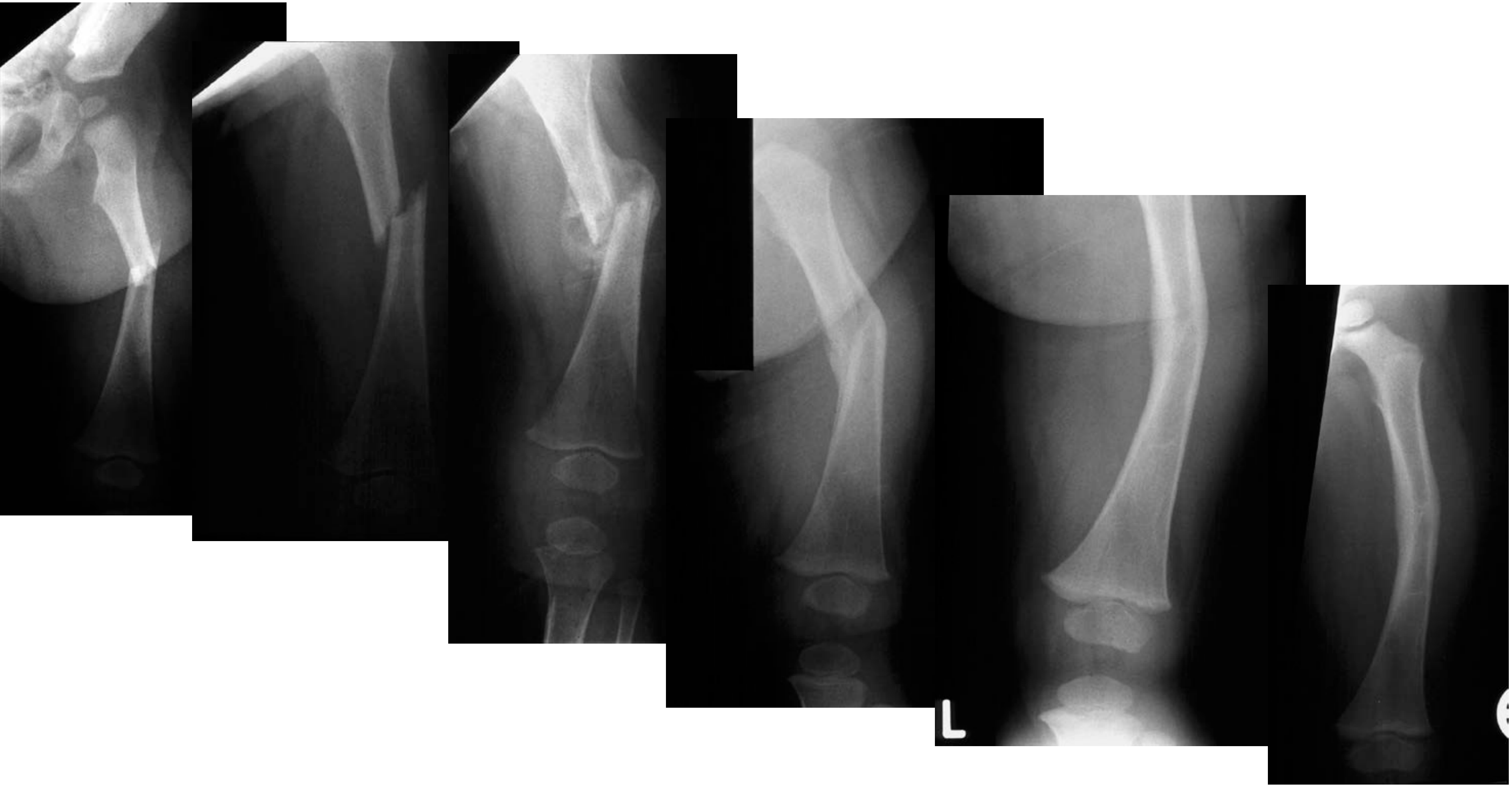
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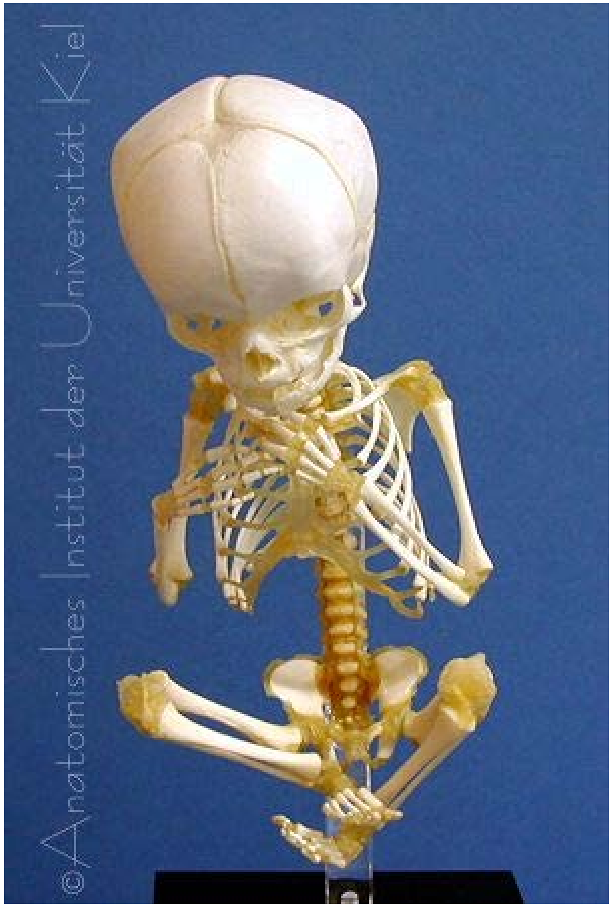
- Schädel
- **Clavicula**
- Humerus/Femur

- (Ellenbogengelenk
- Kniegelenk)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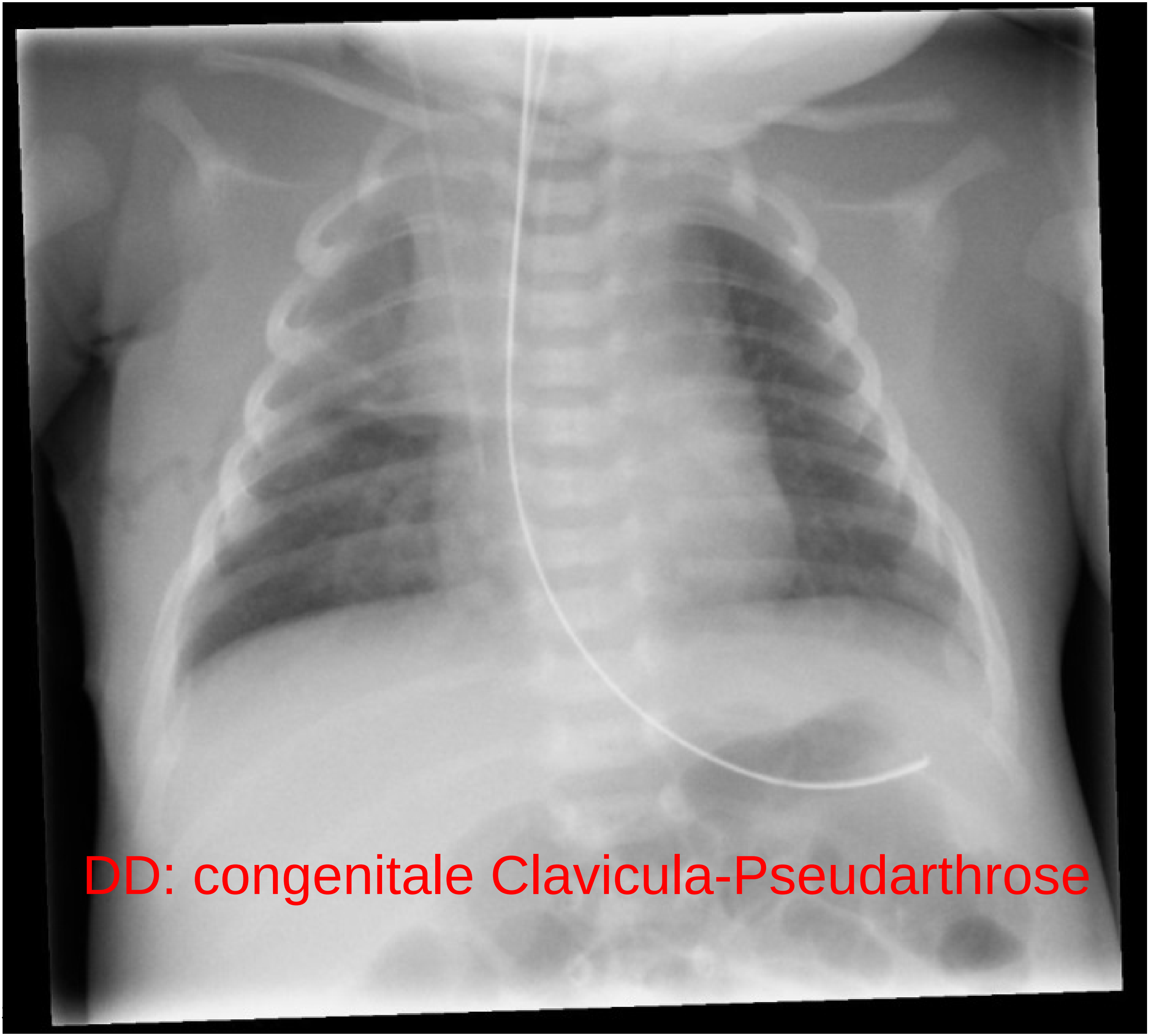
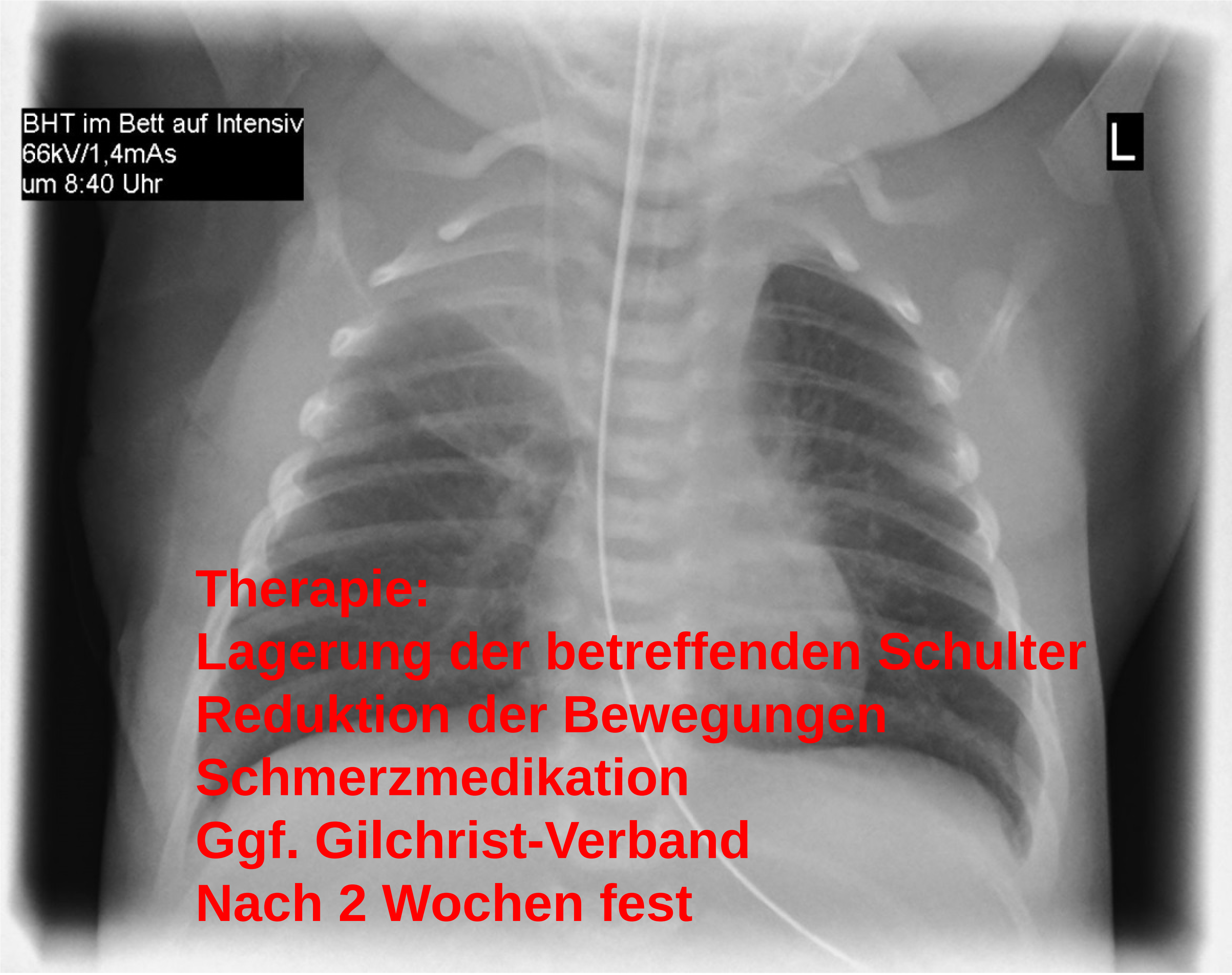


DD: congenitale Clavicula-Pseudarthrose

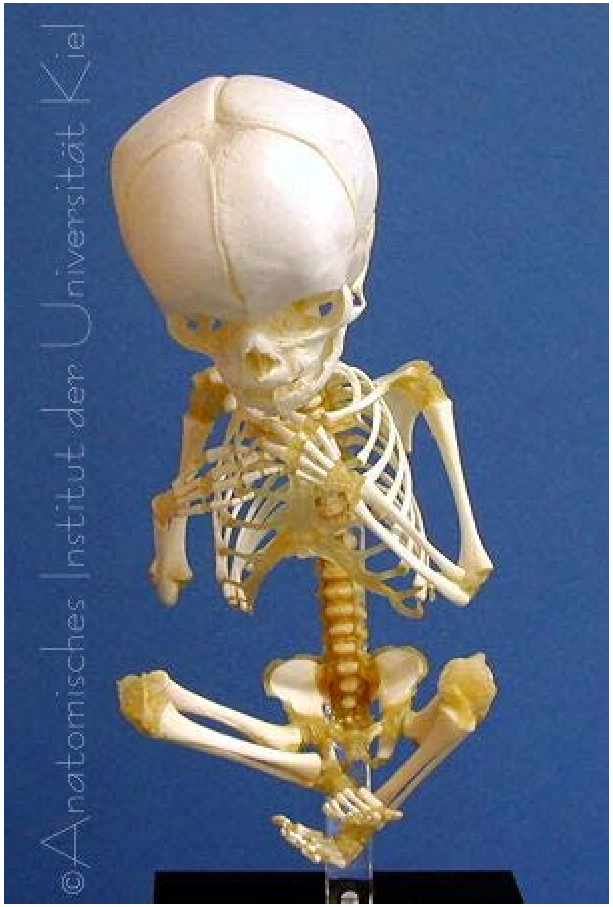

BHT im Bett auf Intensiv
66kV/1,4mAs
um 8:40 Uhr
L

Therapie:

Lagerung der betreffenden Schulter
Reduktion der Bewegungen
Schmerzmedikation
Ggf. Gilchrist-Verband
Nach 2 Wochen fest

- Schädel
- Clavicula
- **Humerus**/Femur

- (Ellenbogengelenk
- Kniegelenk)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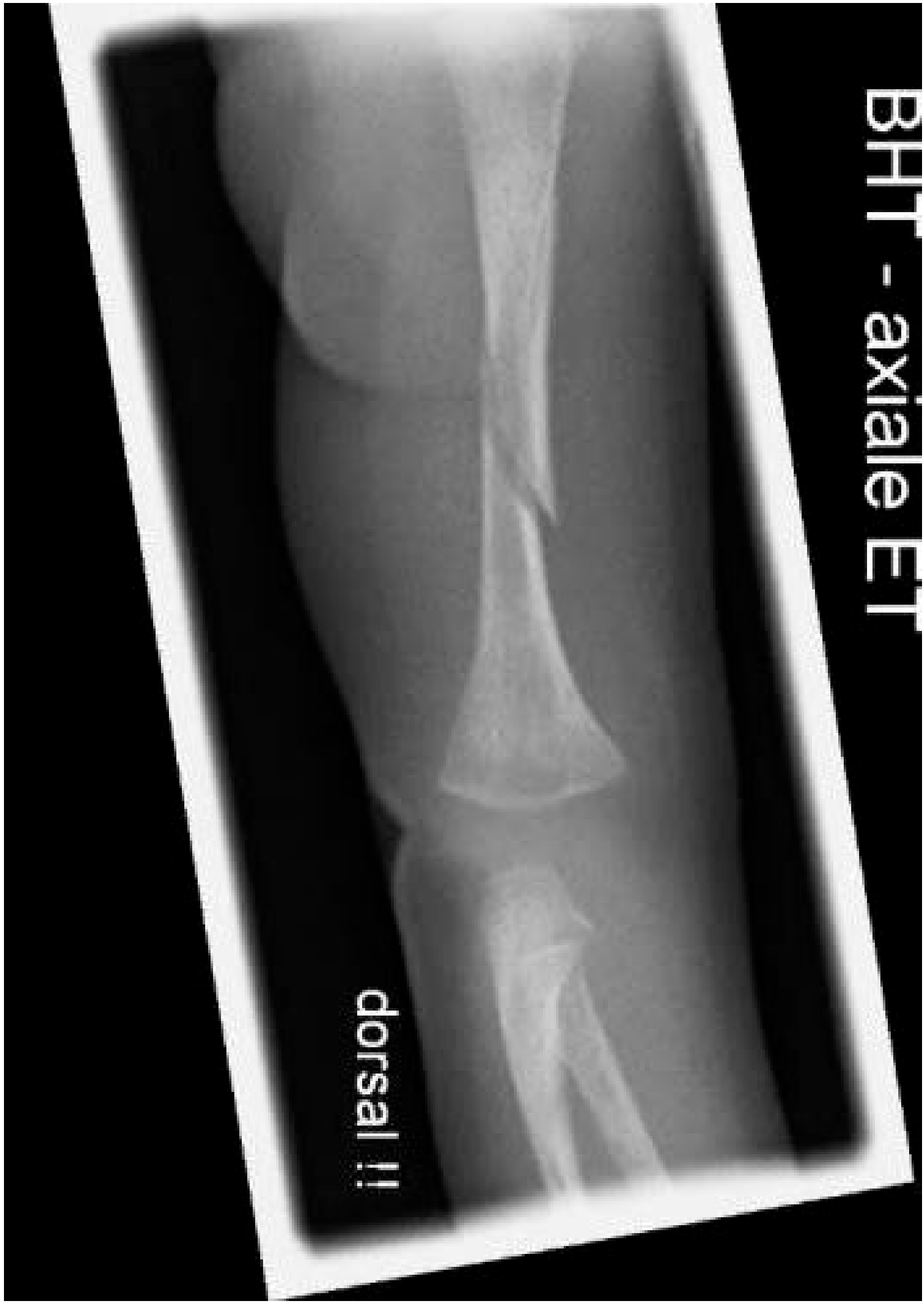
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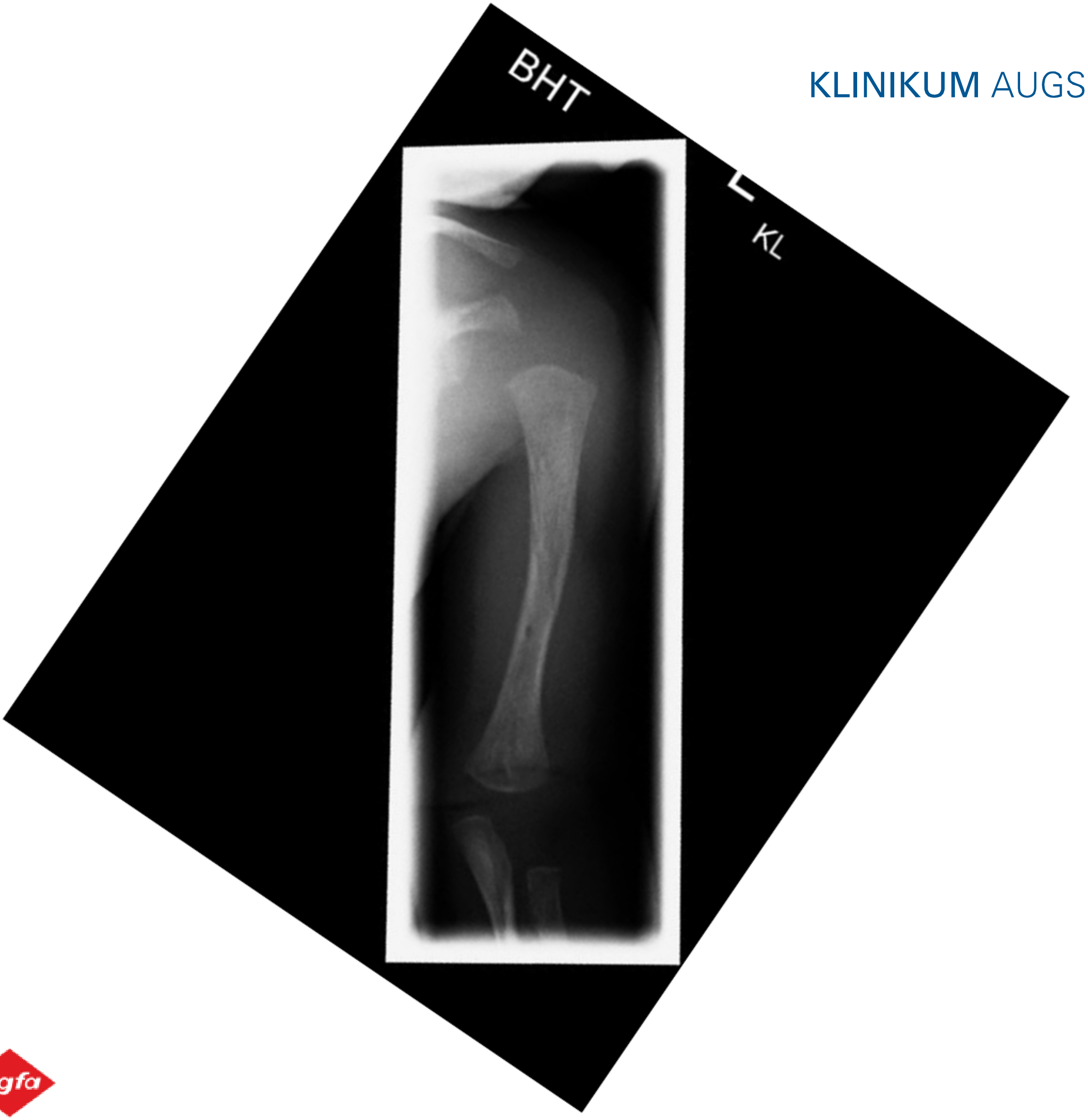
dorsal !!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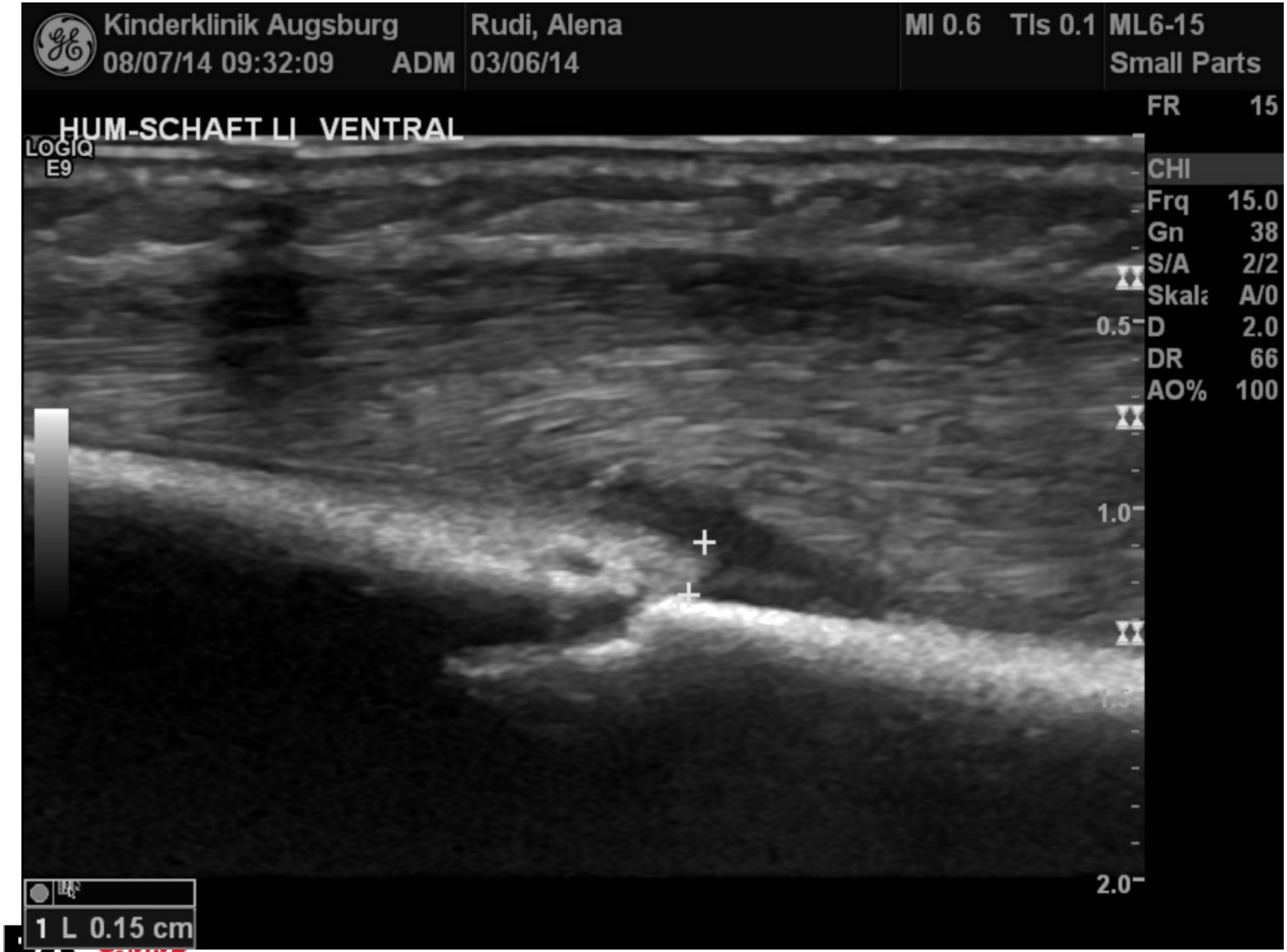
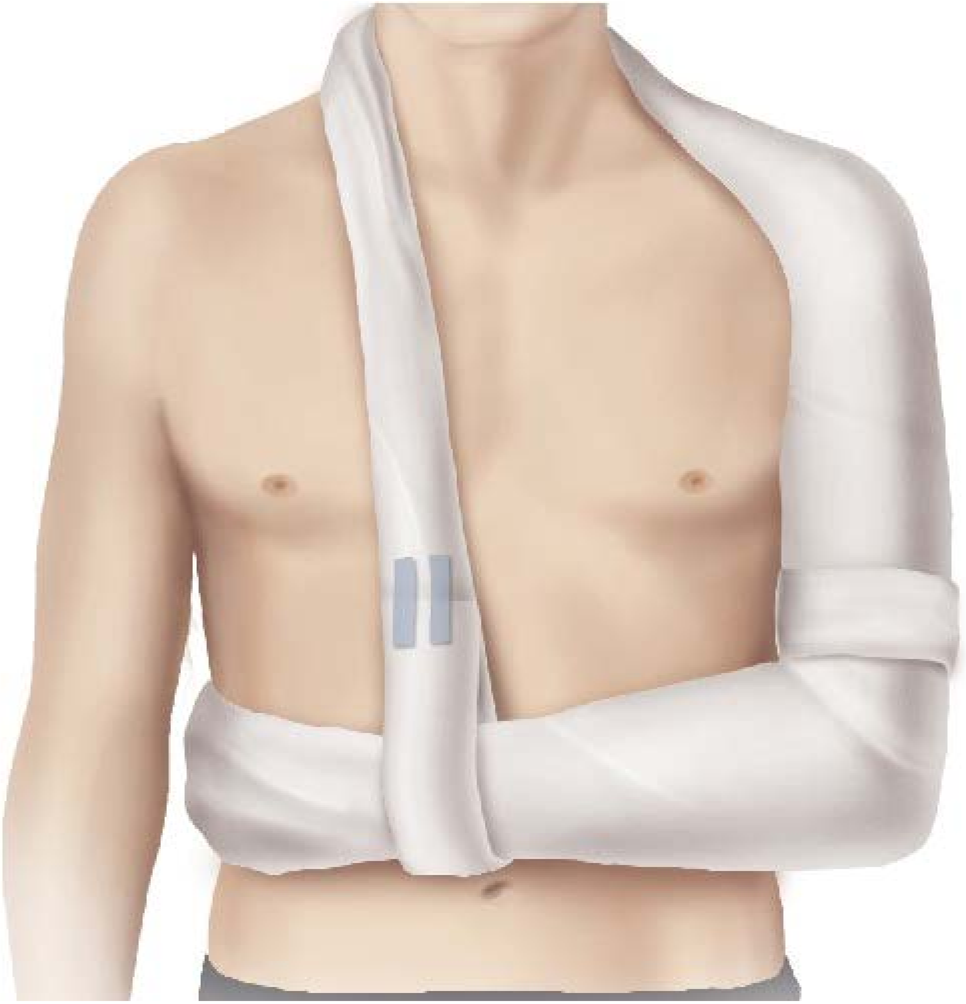
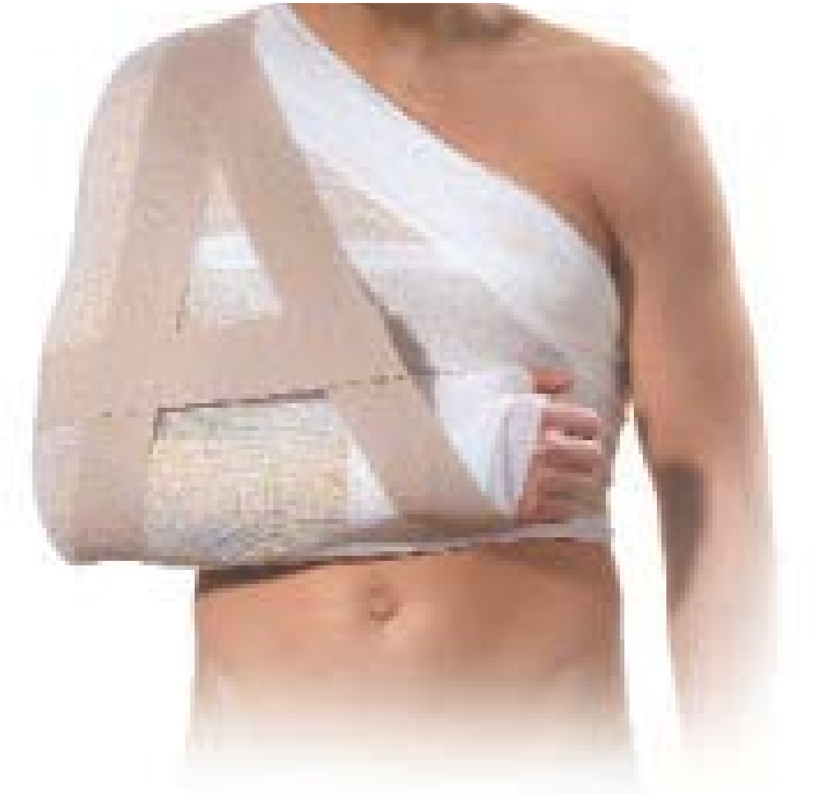
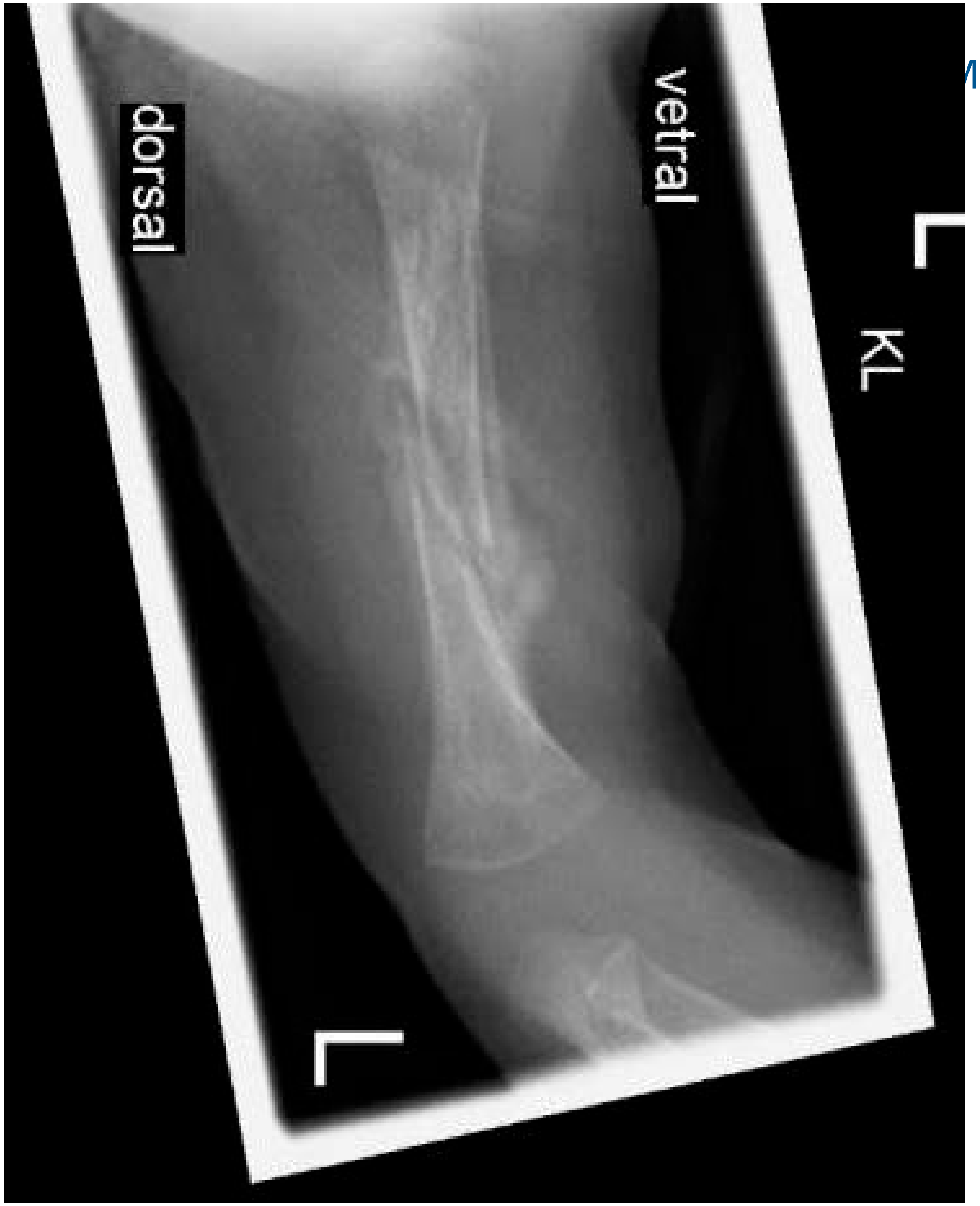

Kinderklinik Augsburg
08/07/14 09:32:09 ADM
Rudi, Alena
03/06/14
MI 0.6
TIs 0.1
ML6-15
Small Parts
FR 15
HUM-SCHAFT LI VENTRAL
LOGIQ
E9
CHI
Frq 15.0
Gn 38
S/A 2/2
Skal A/0
D 2.0
DR 66
AO% 100
0.5
1.0
1.5
2.0
1 L 0.15 cm

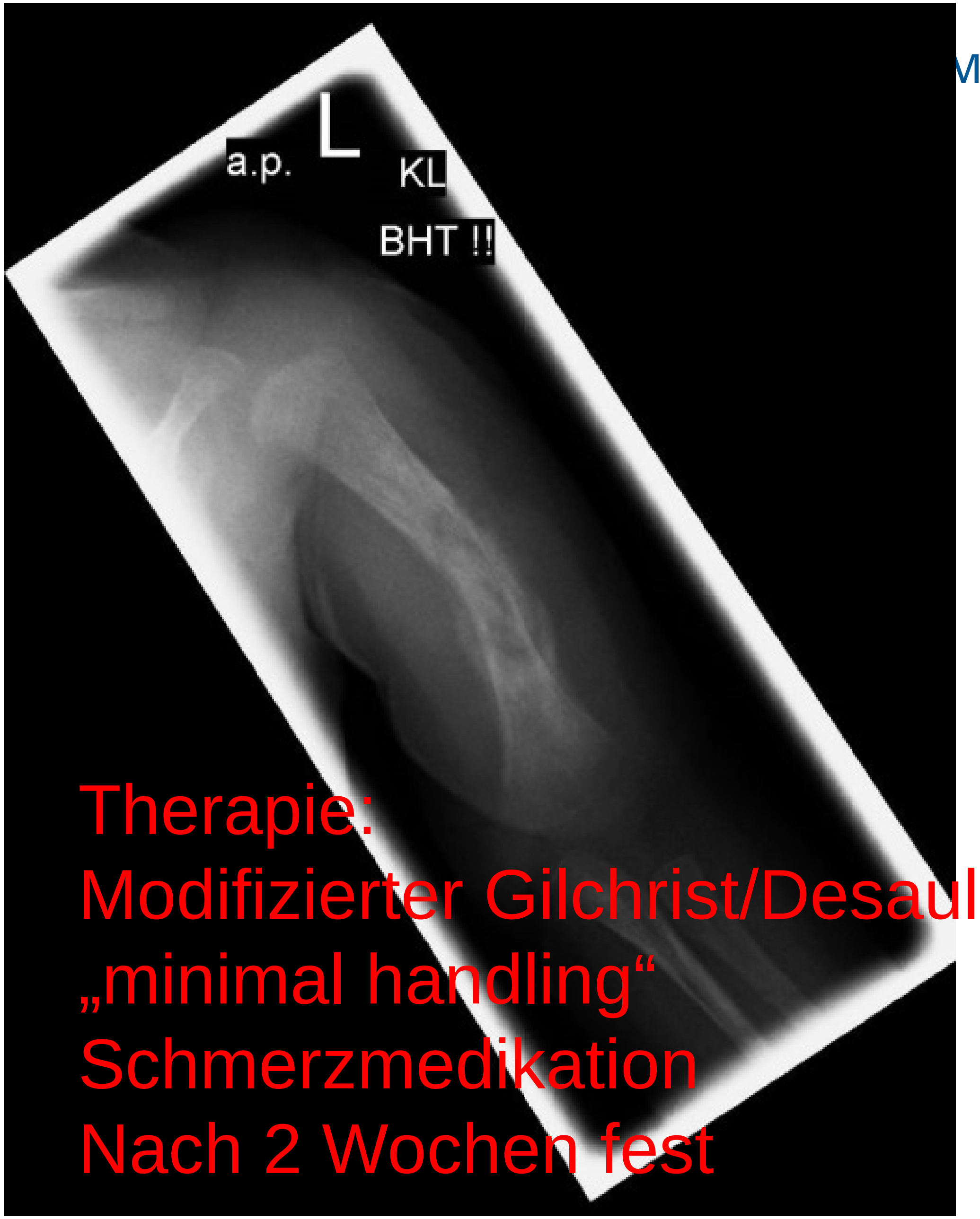
Gilchrist-Verband



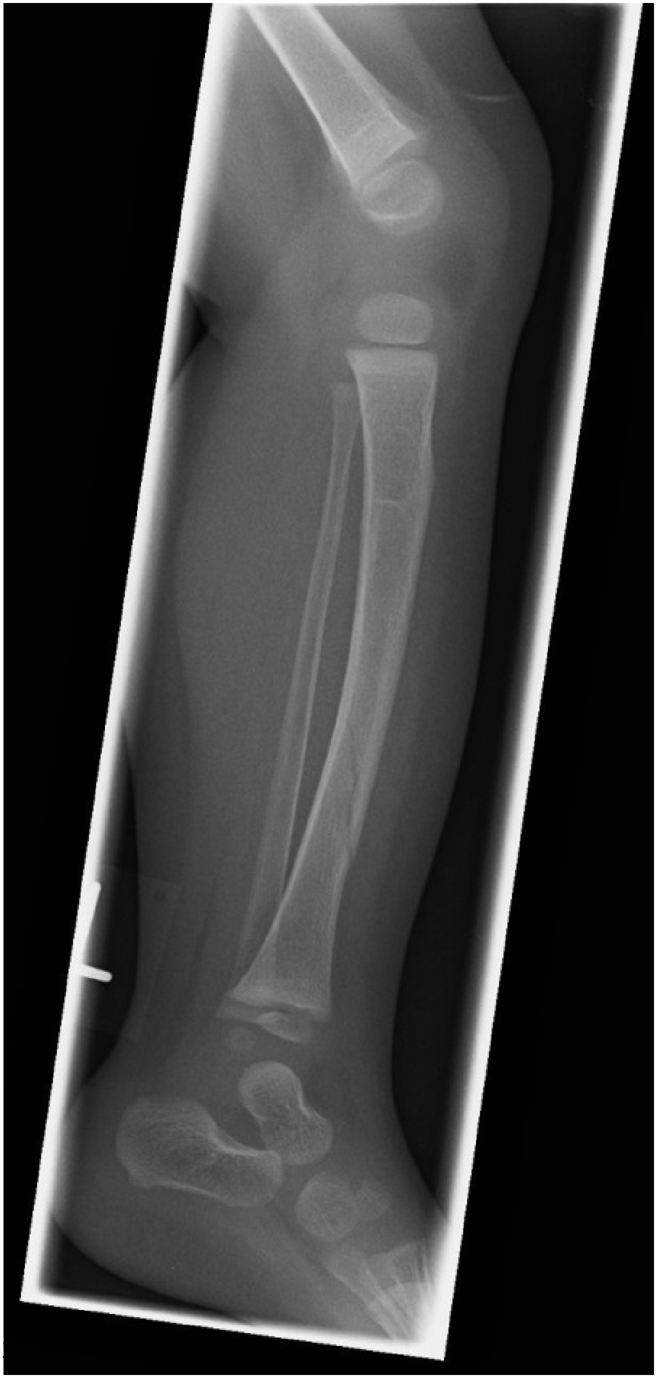
Desault-Verband




dorsal
vetral
KL



Therapie:
Modifizierter Gilchrist/Desault
„minimal handling“
Schmerzmedikation
Nach 2 Wochen fest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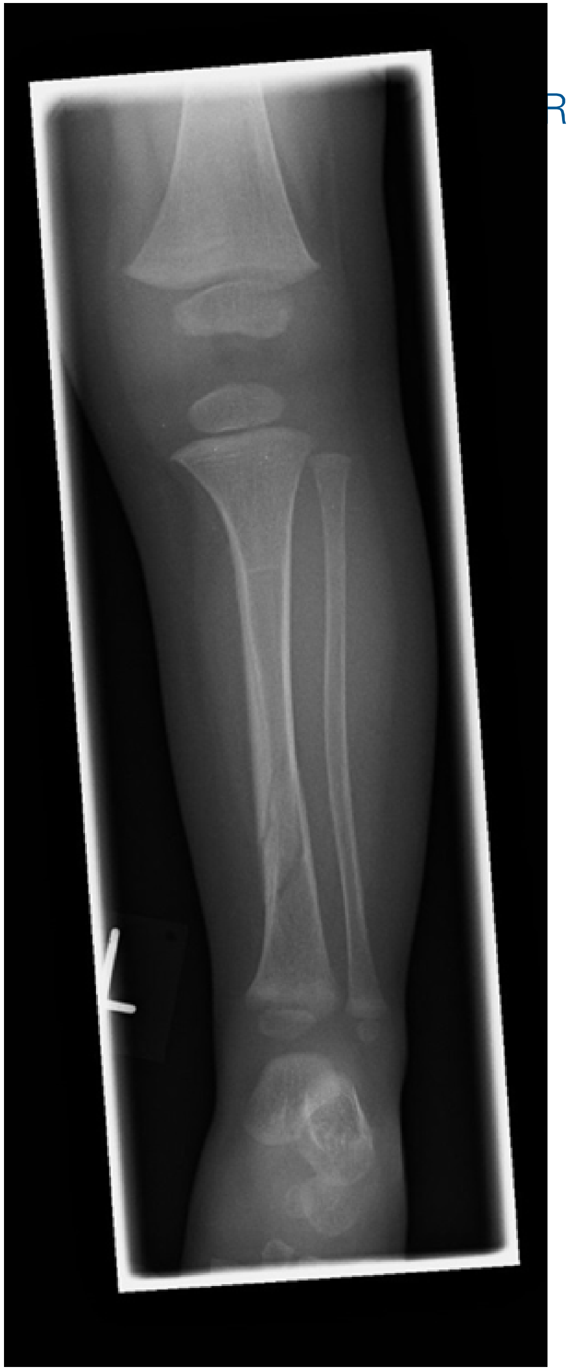
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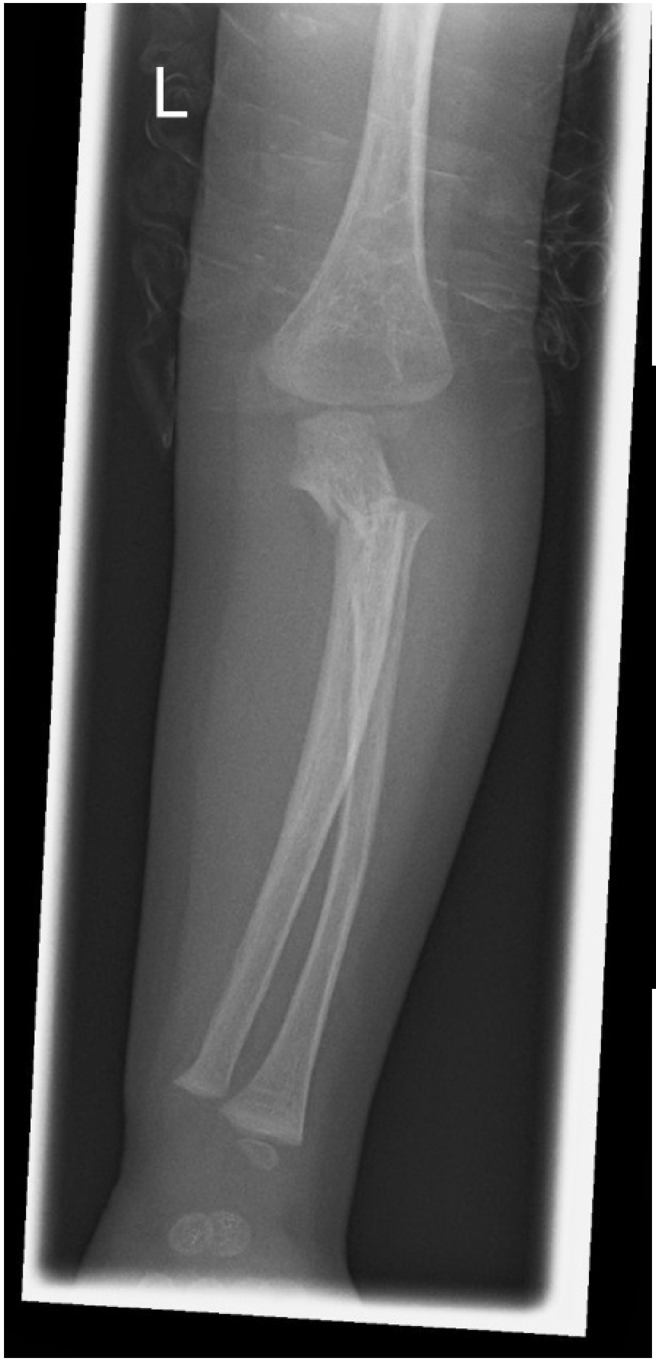
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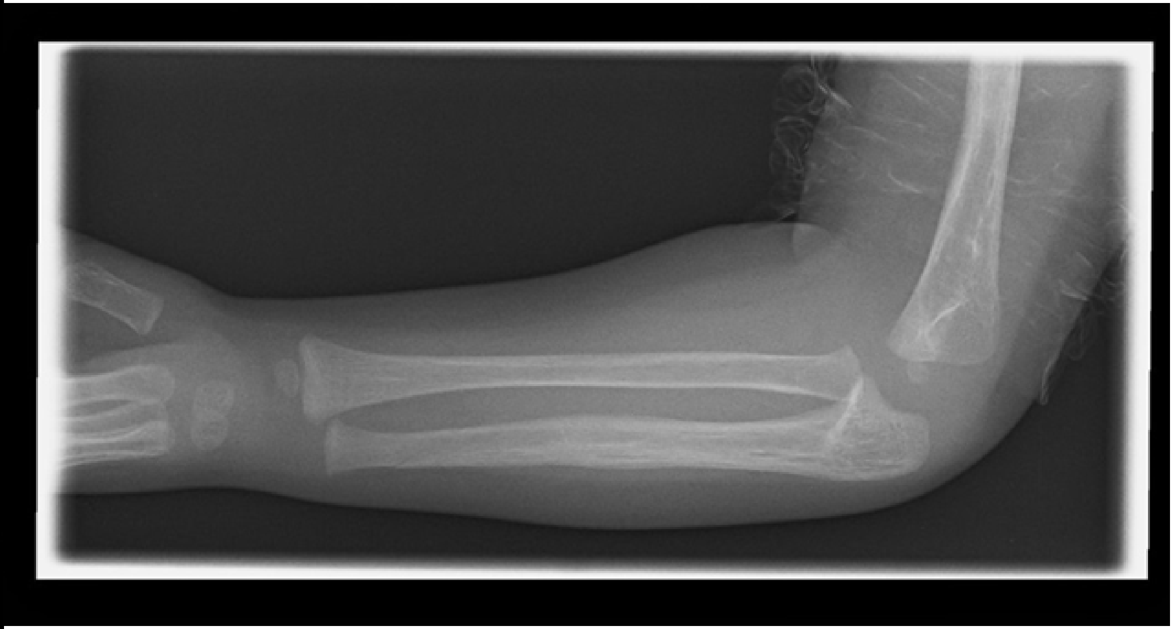

Genetische Diagnostik

- Osteogenesis imperfecta Typ I
- Neumutation bei leerer Familienanamnese
- Mutation c.2728 DupC (p.Arg910Profs*3, Exon 40, COL1A1-Gen)

- Trotz neuester molekulargenetischer Ansätze lässt sich nur bei bis zu 85 % der Betroffenen eine Mutation in diesen Genen nachweisen, ein fehlender Mutationsnachweis schließt eine OI daher in keinem Fall aus!

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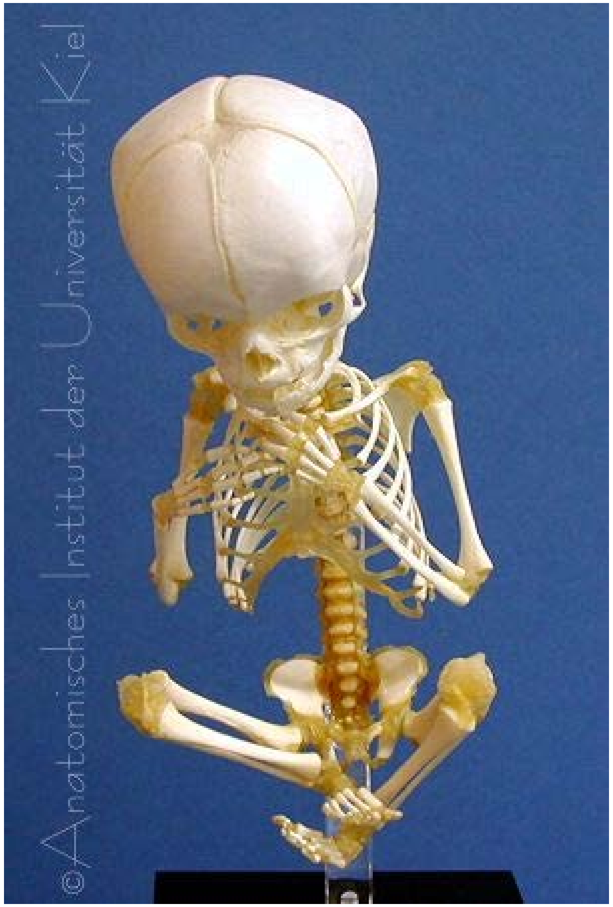
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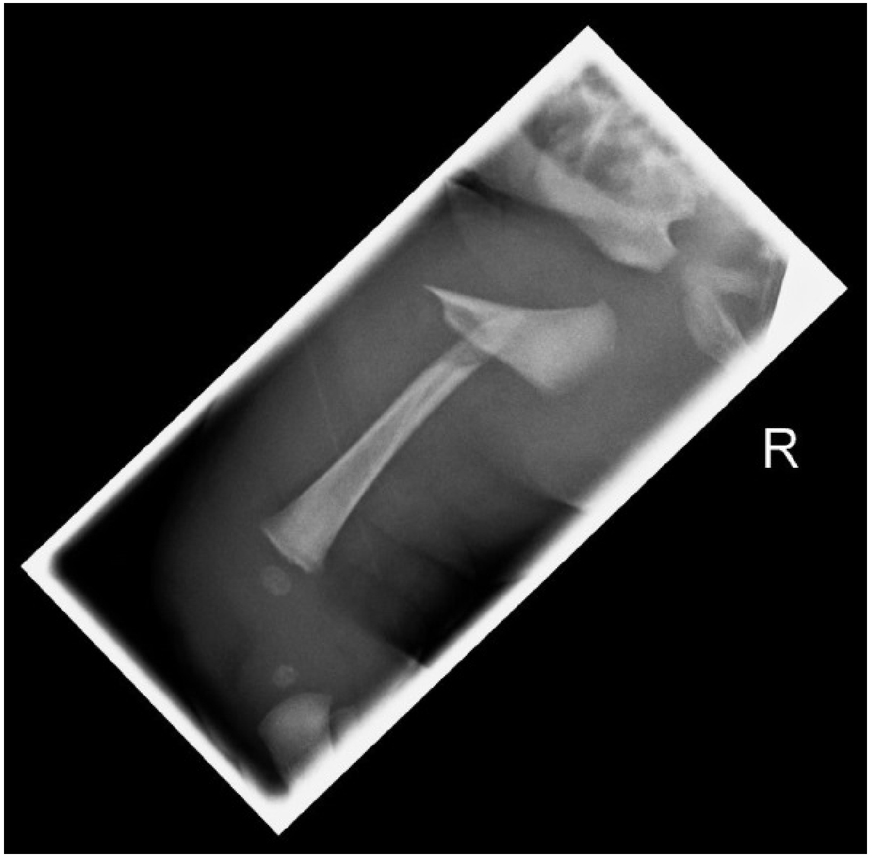
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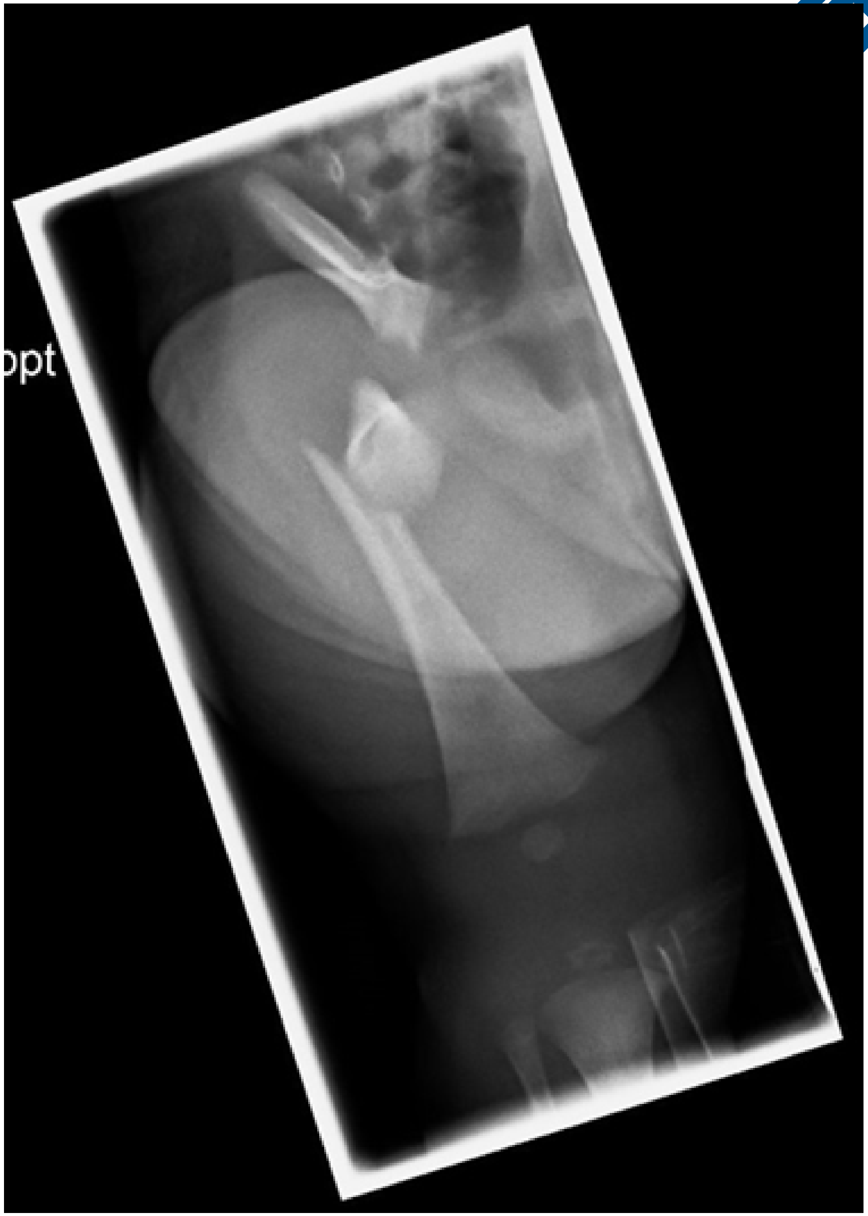
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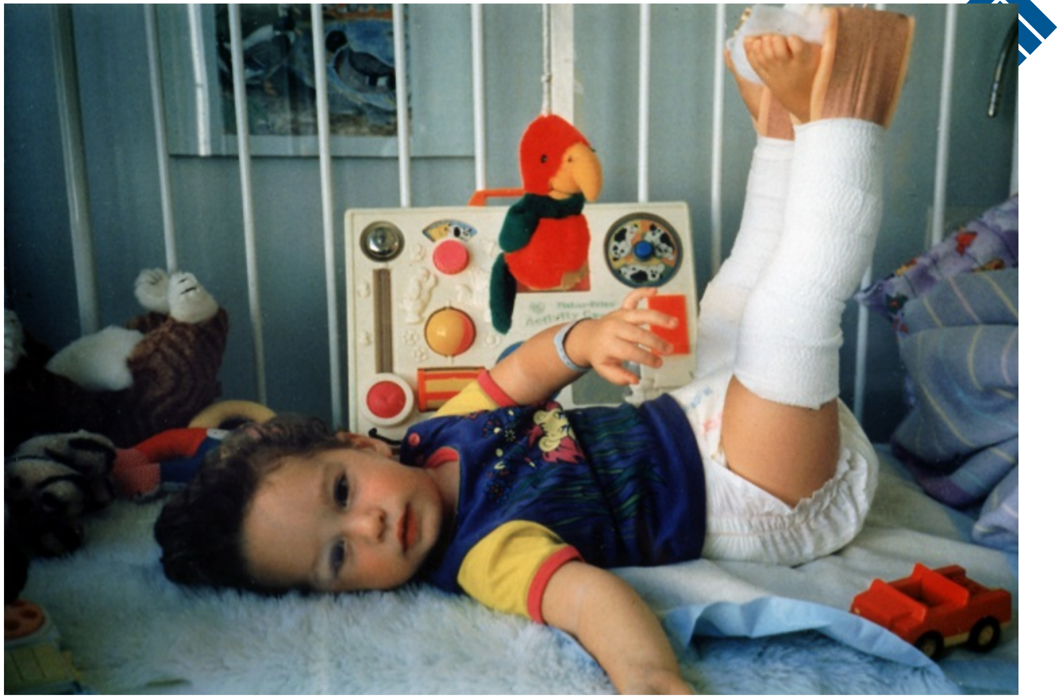
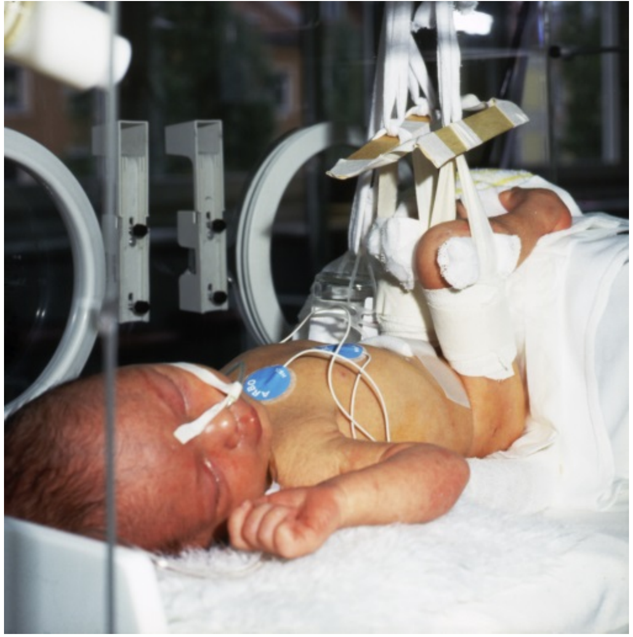
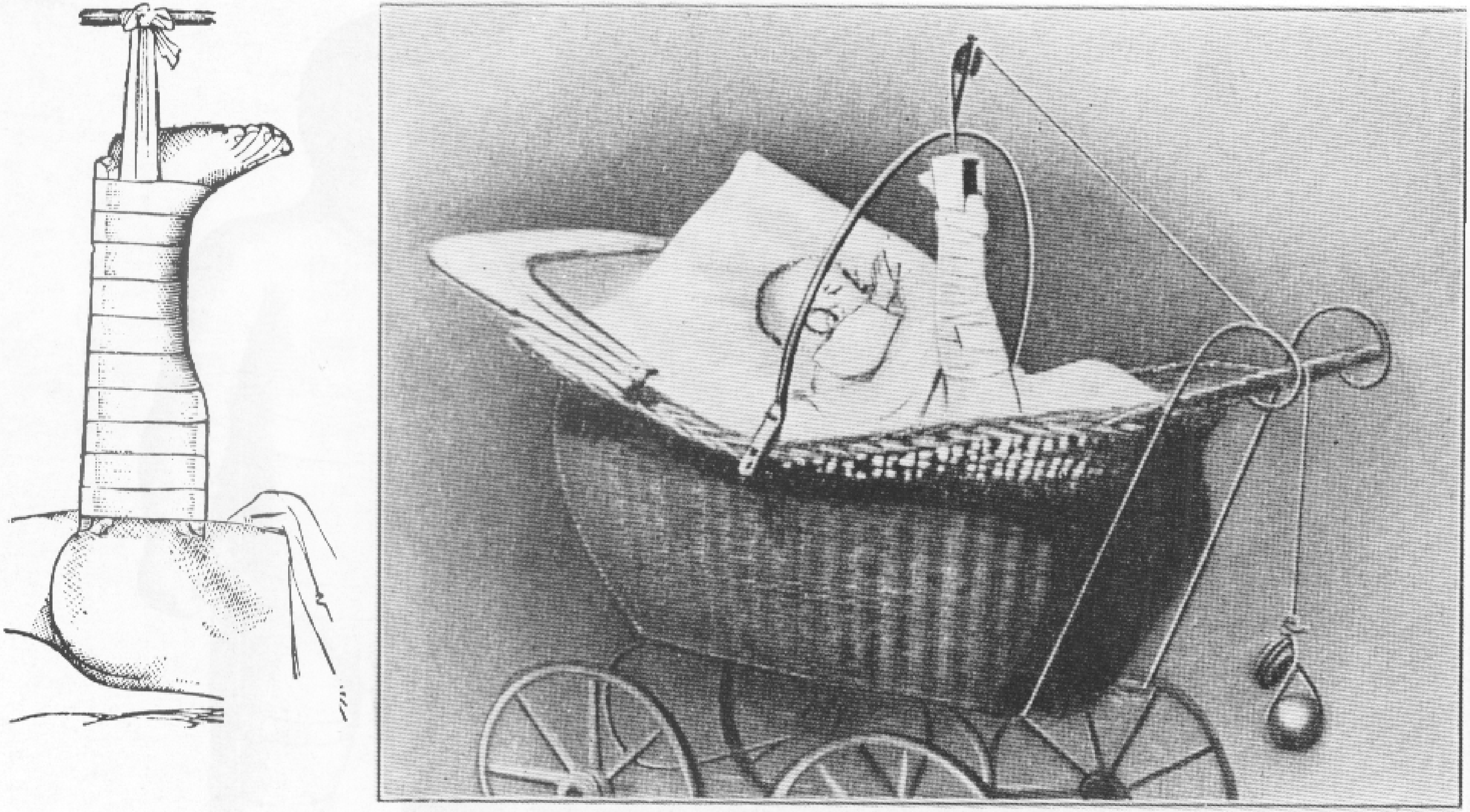
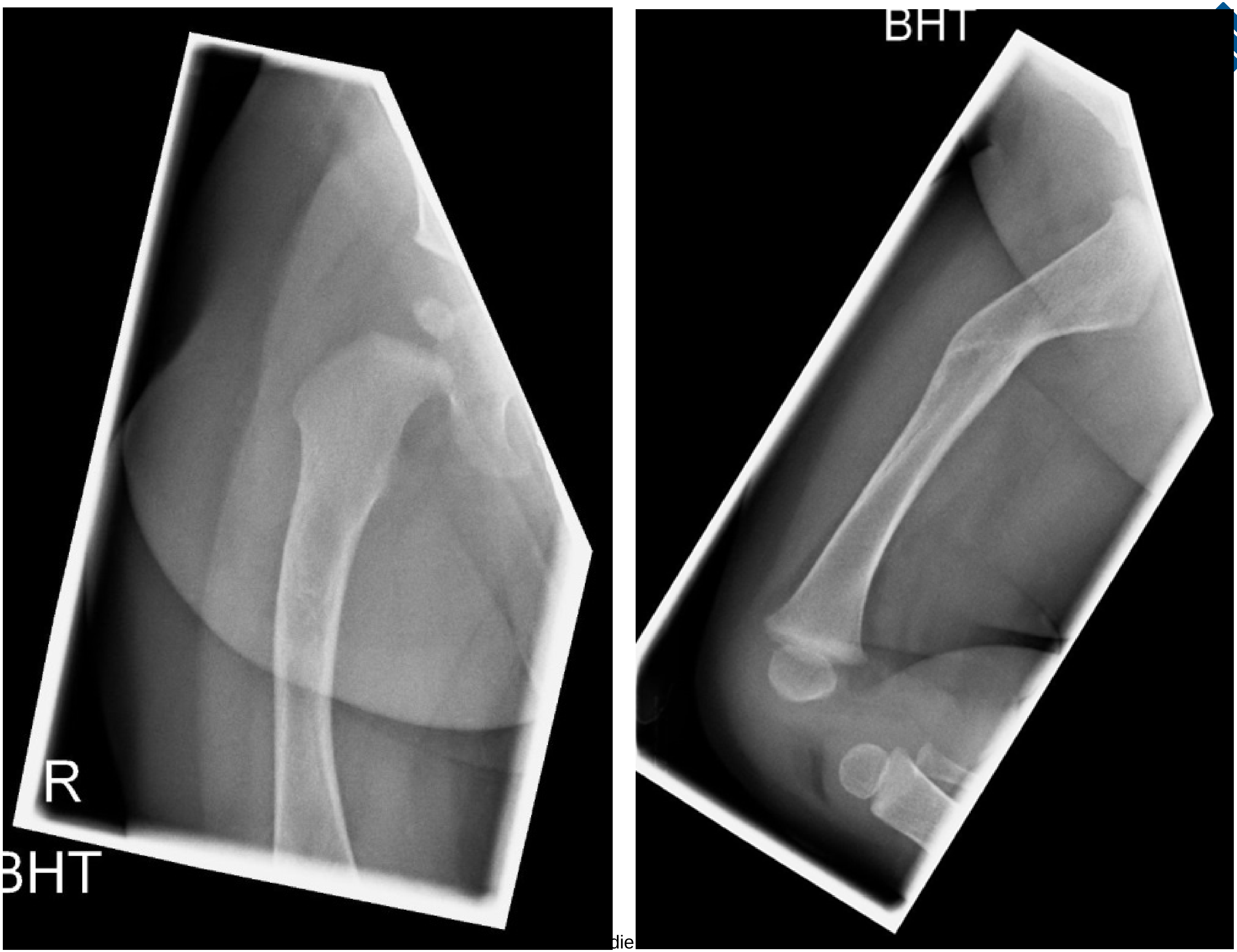
- Therapie:
  - Overhead-Extension
  - In 2-3 Wochen fest
  - Ausnahme:

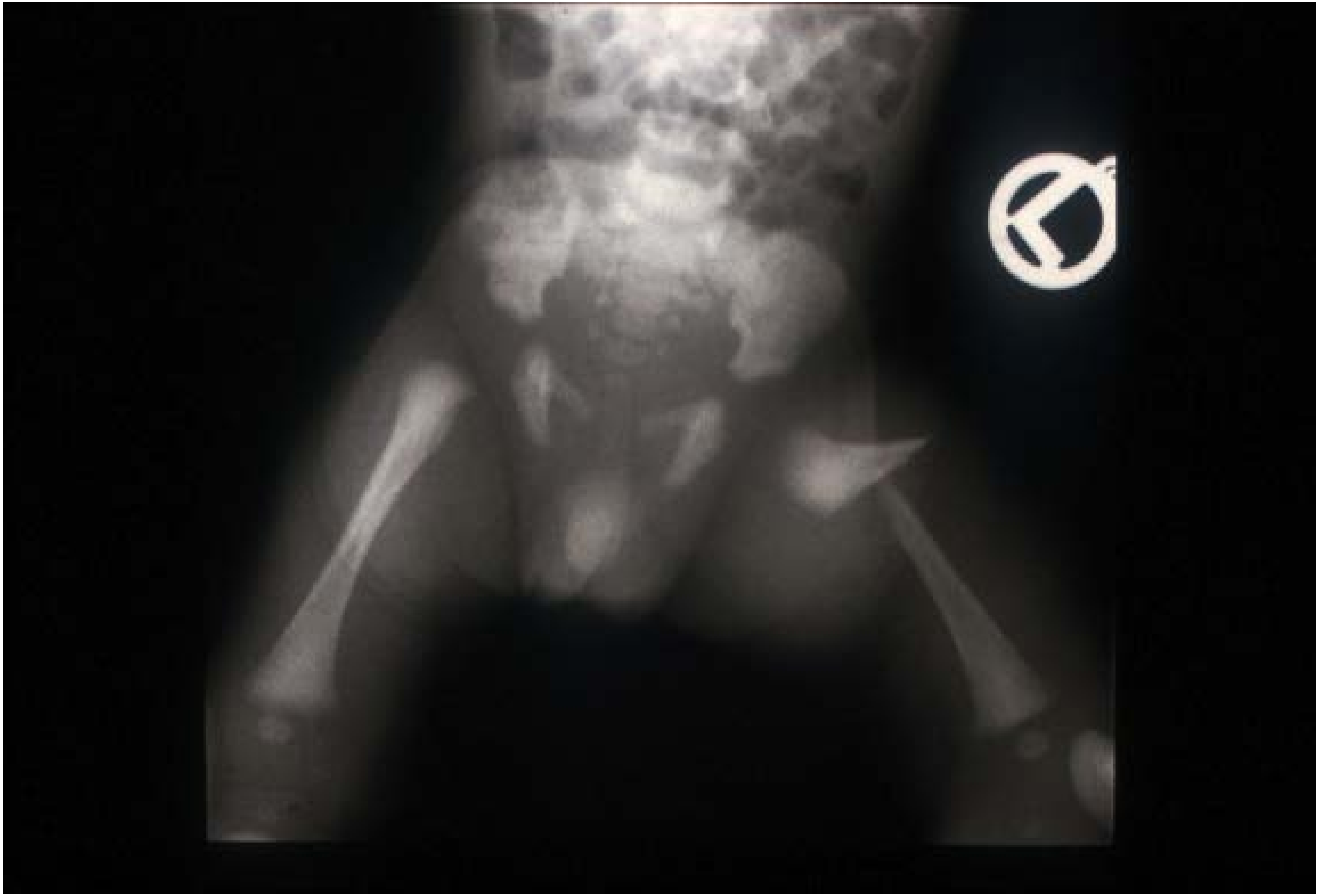


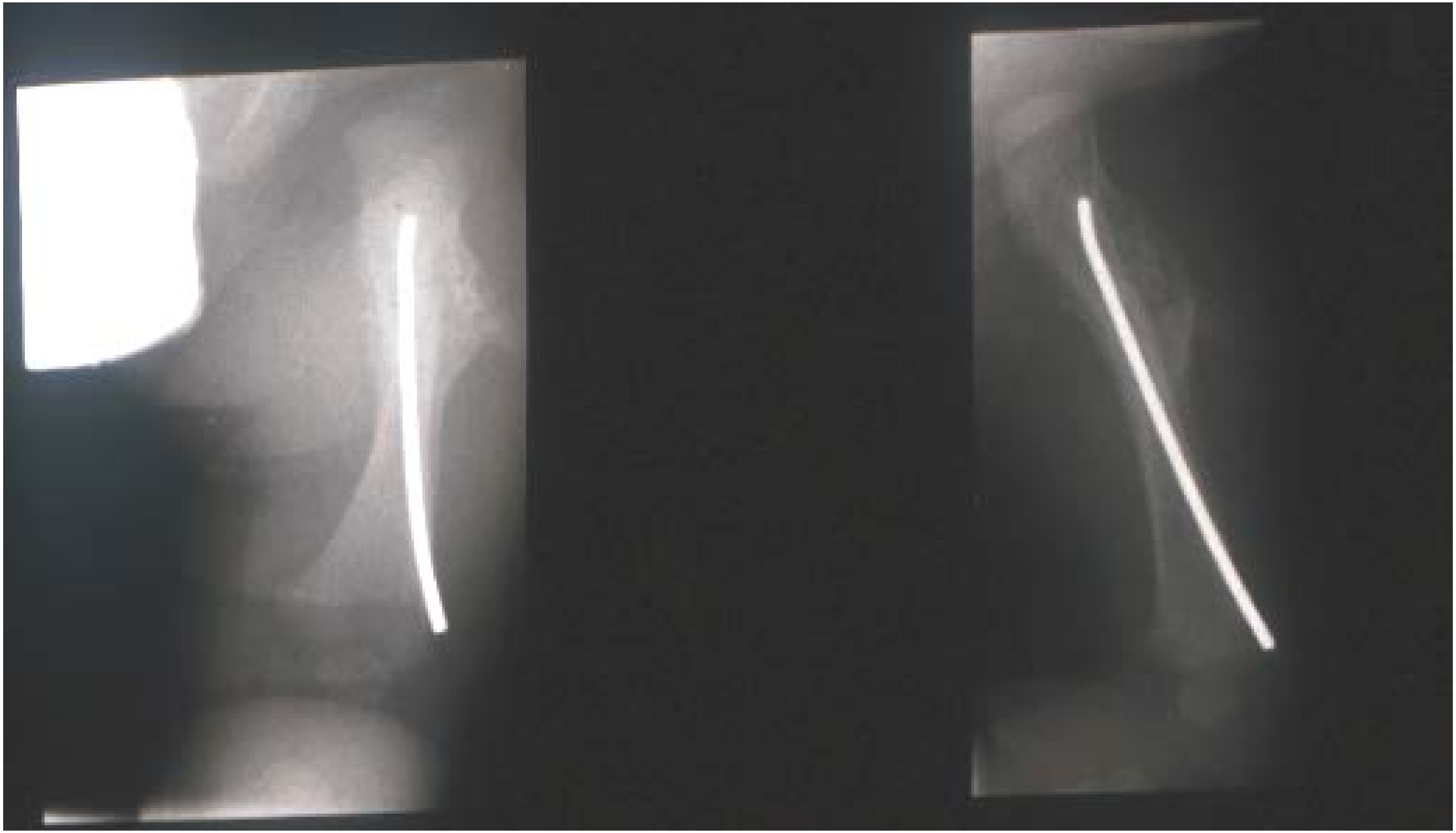






die





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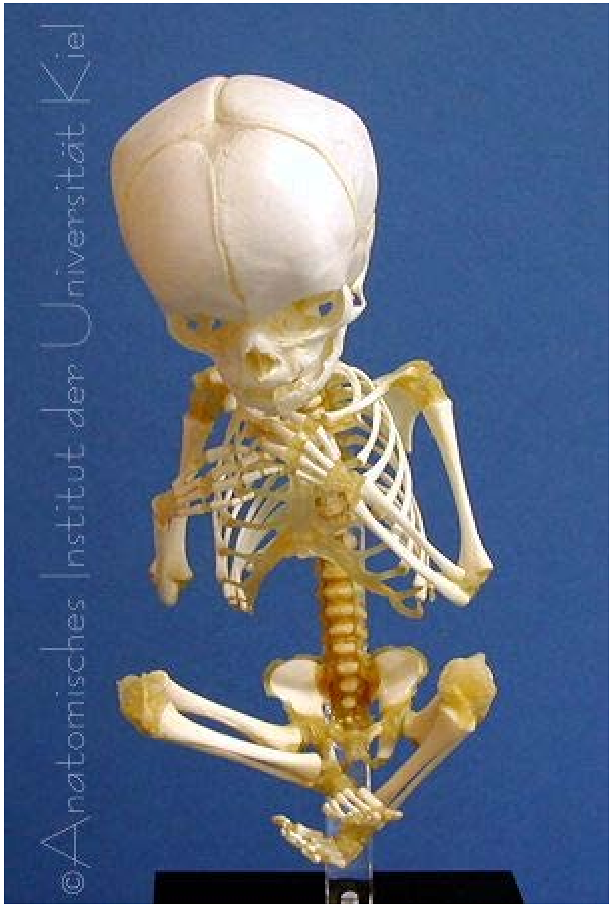
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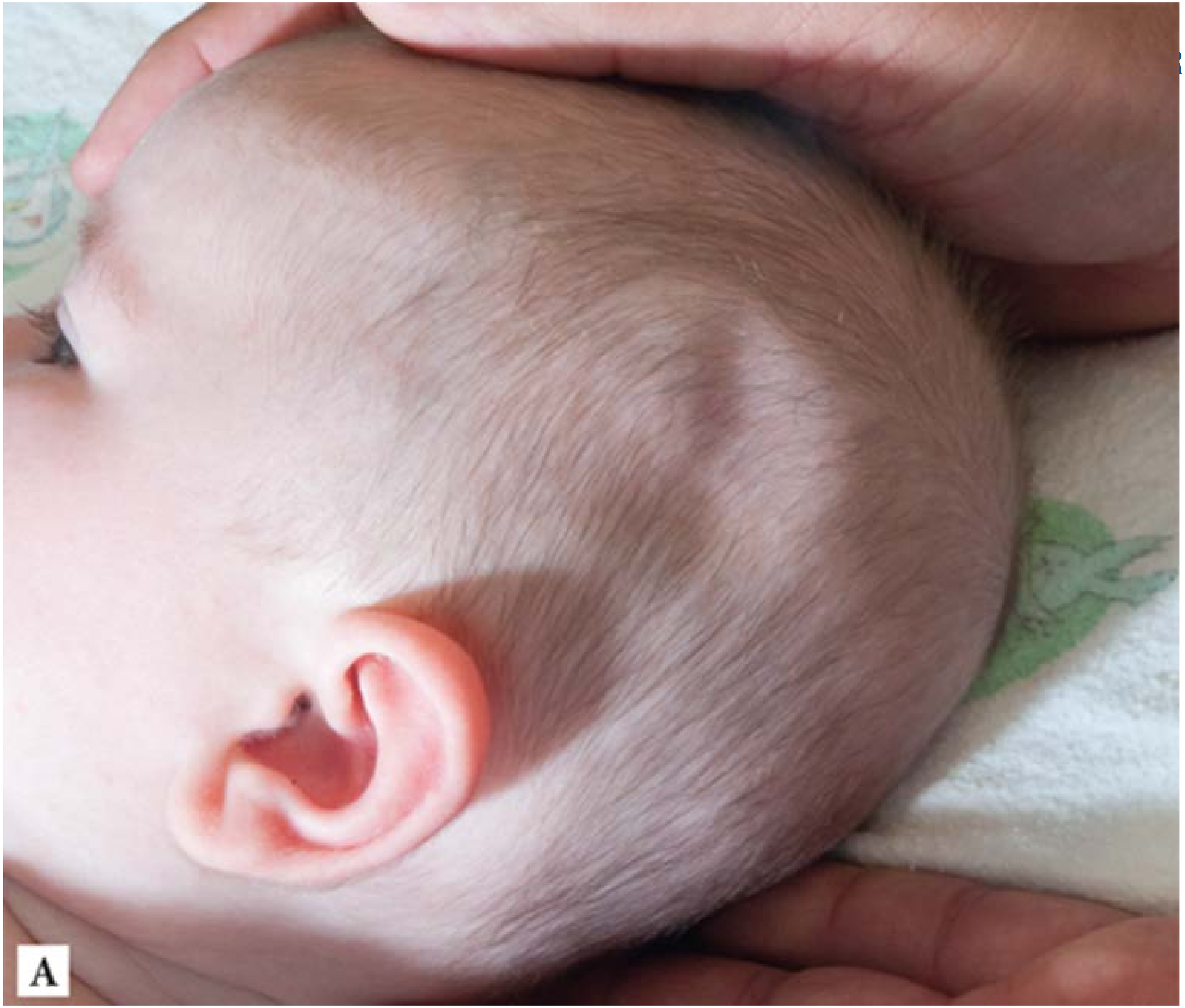
„ping-pong-Fraktur des Schädels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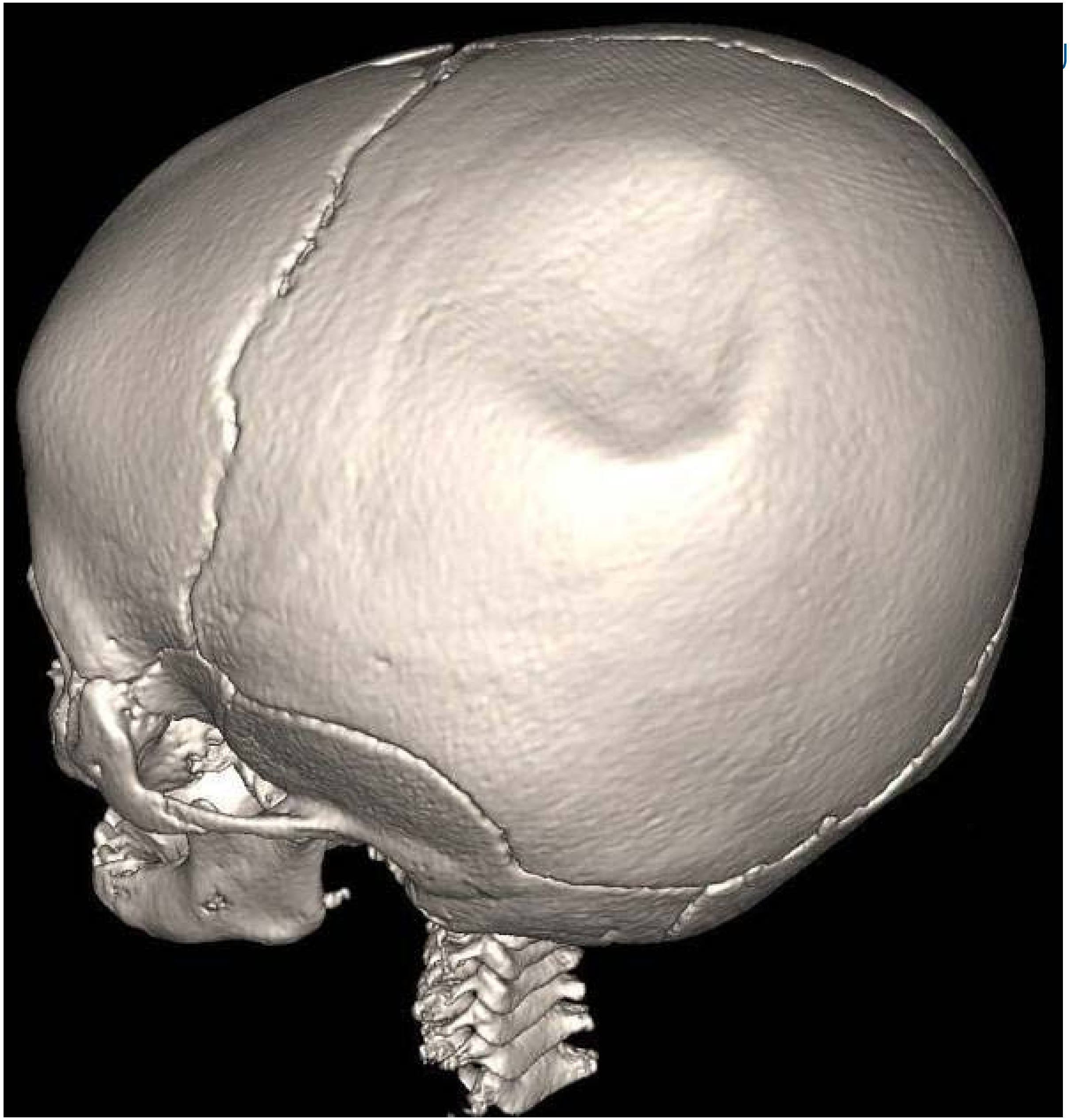

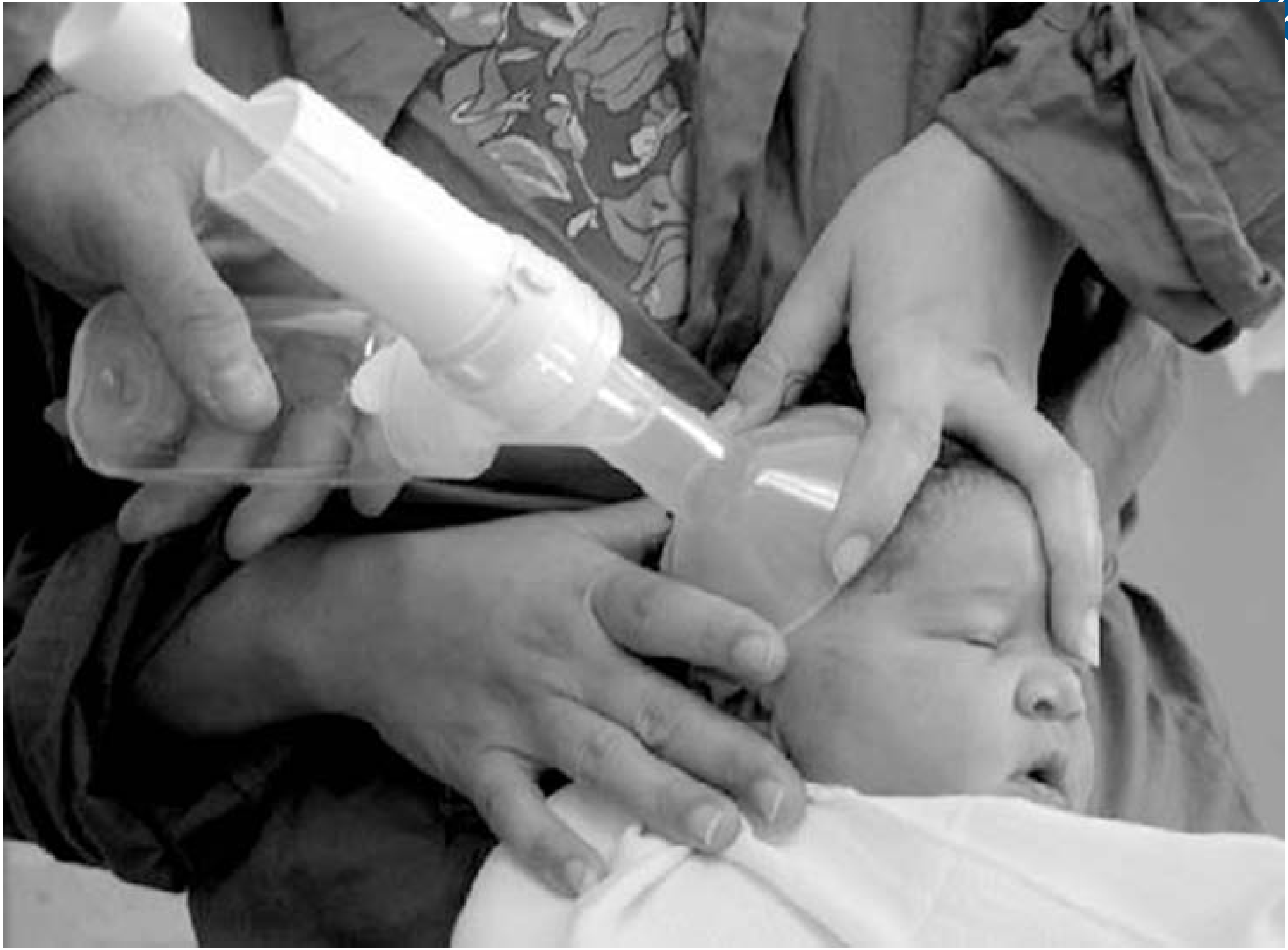

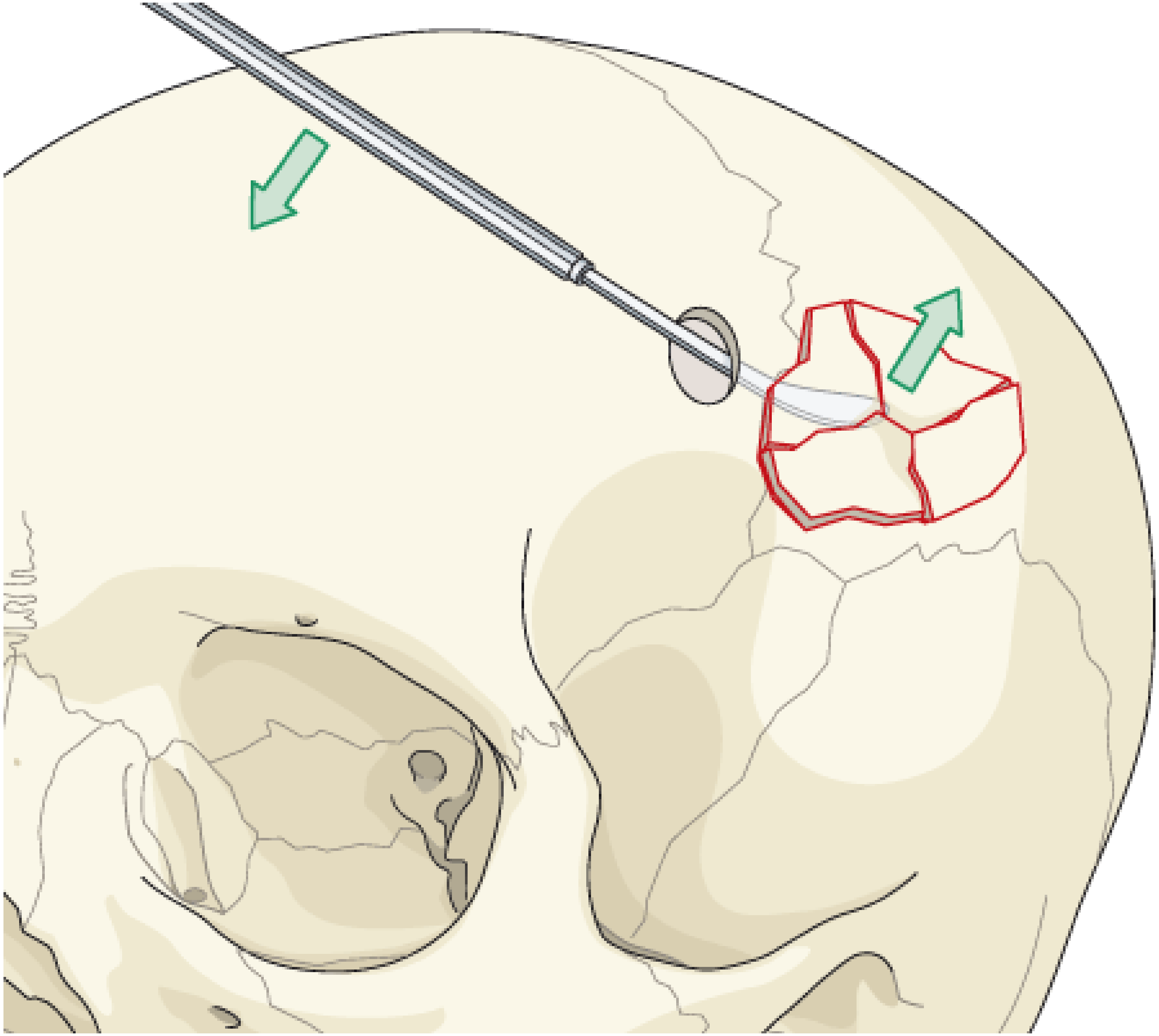

Op-Indikation bei Schädel-Impression

- Je nach Literatur zwischen Impressionstiefe von einer Kalottenbreite bis zu 2 cm.

Zusammenfassung

- Neonatale Frakturen
  - Rasche Frakturheilung
  - Hohe Korrekturpotenz
  - Meist konservative Behandlung
  - Sehr gute Prognose
  - Meist folgenlose Ausheilung

  - Cave Diagnostik

  - Cave psychische Belastungskomponente