

Dr. Heinz Tschäppeler X-ray-archive of paediatric radiology

Integration of the musculoskeletal cases of the Dr. Heinz Tschäppeler X-ray-archive into the web page „PediRad“

Introduction

Dr. med. Heinz Tschäppeler was the former department chief of paediatric radiology of the university hospital of Bern. During his term he collected a very extensive and systematic compilation of paediatric radiographs, known as the “Tschäppeler-archive”.

The intention was to review the musculoskeletal cases and to integrate them into the web page PediRad, so that they are available for education. (<http://e-learning.studmed.unibe.ch/pedirad>)

The content will be available in 2017.

Method

The musculoskeletal cases of this collection of images underwent a revision and were classified based on the paediatric radiology teaching program of the department of diagnostic, interventional and paediatric radiology, university hospital of Bern. Every case has a specified number of image-identification. The pictures were made anonymous and processed with “Fotor” and “Snagit”. In cases with more than one x-ray (follow-up images), they were merged as one image. The comments have been audited and amendments like modalities, anatomical region and age of the children were added. The images were prepared with “IrfanView” for the automatic data import. The musculoskeletal images are uploaded in the learning modules D, E and G on Tschäppeler-archive on the PediRad-platform. The categories “classification of anatomical region” and “classification of age” were constructed and the images were additionally divided in these categories. To almost each case a corresponding link to “Radiopaedia” or a similar web page was added. For each learning module questions, suitable for their educational objectives, were constructed.



Figure 1: Thalassämia major, skull, male, 7 years, classic "hair-on-end" appearance



Figure 2: Battered Child with costal fractures, thorax, male, 3 months

Results

Around 1200 cases with a wide range of x-ray images are ready for a broad audience and will soon be published among the established “PediRad” modules. Among the clinical pictures are also rarely seen images. The cases of the “Tschäppeler-archive” will be used for education and advanced training of students and physicians.



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Einführung Thoraxröntgen Skelettröntgen Ultraschall Tschäppeler-Archiv Bildarchiv Abk. Hilfe Sitemap

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D1 Skelette Entwicklung

Bild 34/157 - Röntgenbild: Floride Rachitis Edieren - Neues Slide #6056

Hand, Männlich, 5 Monate
Vergleichsbilder im PediRad.

Skeletmanifestationen der Rachitis in der Bildgebung

- Die gestörte Mineralisation fällt vor allem beim wachsenden Knochen an den Metaphysen auf. Dort gelegenes nicht mineralisiertes Osteoid führt zur Erweiterung der Wachstumsfuge und becherförmige ausgefranste Aufreibungen der Metaphyse.
- Besonders auffällige Wachstumsröhren sind an Orten mit dem höchsten Stoffwechsel zu sehen wie am distalen Femur, an der proximalen Tibia und an der Ulna.
- Typisch ist der rachitische Rosenkranz, dabei kommt es an der Knorpel-Knochengrenze der anterioren Rippen zu Aufreibungen.
- Die verminderte Mineralisierung hat auch zur Folge, dass sich die Knochen, bevorzugt die an den unteren Extremitäten, verkrümmen.

Was ist keine typische Veränderung bei Rachitis?

A: Aufreibung der Knochen-Knorpel-Grenze der Rippen
 B: Loser-Umbauzone
 C: Zeitlich normwertiges Auftreten der Knochenkerne
 D: Becherförmige Metaphysen

Antwort überprüfen

Figure 3: Example for a Tschäppeler-archive case on PediRad and an adapted question (Answer C is correct)