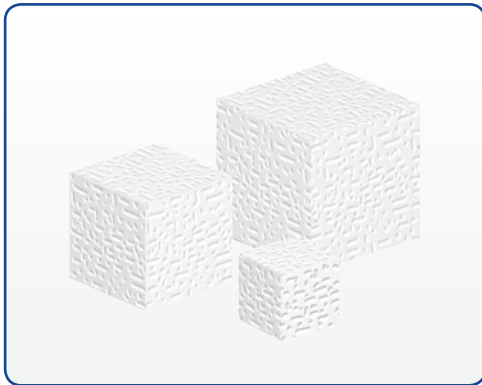


Bone void filling

Clinical examples

BIO 1[®]



Case 1

Filling of the upper part of the femur after essential bone cyst resection (15 years old male).

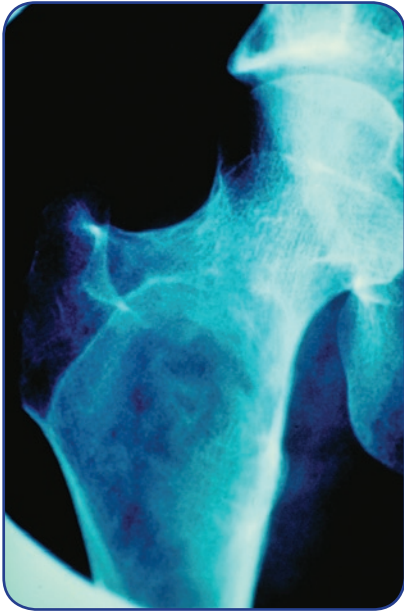


Fig 1: Pre-op X'Ray



Fig 2: 3 months X'Ray



Fig 3: 6 months X'Ray

Fig 1 : Pre-operative X'Ray.

Fig 2 : 3 months post-operative X'Ray. The bone defect resulting of the cyst resection, has been filled tightly as possible with Biosorb granules and cubes, avoiding empty contact areas.

The implants were used alone, without autograft. New bone is clearly seen surrounding the implants, without any gaps, as signs of resorption are visible in the upper and lower part of the filled cavity.

Fig 3 : 6 months post-operative X'Ray, showing a good consolidation and satisfying bone volume recovery ; the grafted areas appear more homogenous. The implants are entirely surrounded by bone and the upper and lower ones almost completely resorbed.

Case 2

Filling of the upper part of the femur after essential bone cyst resection of a 15 years old female that already had two consecutives operations due to two spontaneous fractures using autograft and osteosynthesis. After curreting, the cavity was filled with Biosorb granules and cubes.



Fig 1 & 2: Pre-operative X'Ray. We observe fissuring of the cyst on the scan.

Fig 1: Pre-op X'Ray

Fig 2: Pre-op X'Ray

Fig 3, 4 & 5 : 1 month, 4 months and 6 months X'Rays. The radiological evolution on this period shows a progressive development of gaps between the grafts. The grafted zone appears more homogenous and shows a good bone volume recovery and a satisfying consolidation after 6 months, with a good bone density. New bone is clearly seen surrounding the implants, sign of a good resorption. After 1 year, the patient can normally walk without walking stick, and also gets back to the sports and physical activities of her school.



Fig 3: 1 month Post-op X'Ray

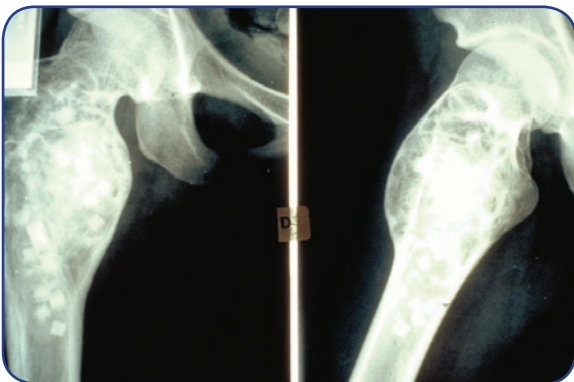


Fig 4: 4 months Post-op X'Ray

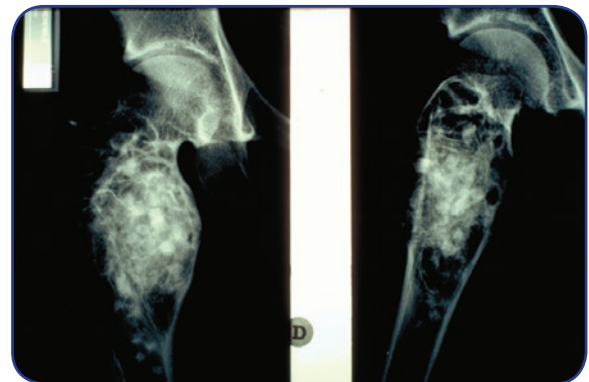


Fig 5: 6 months Post-op X'Ray

Case 3

Tibial plateau fracture (44 years old female).



Fig 1: 3 months Post-op X'Ray

Fig 1: 3 months X-Ray after operation. The fracture was reduced and bone defect due to cancellous bone crushing filled with 45% porosity Biosorb cylinders. The patient was allowed to walk immediately after operation. The borders of the implants seem already weak and signs of the resorption appear around the upper ceramic.

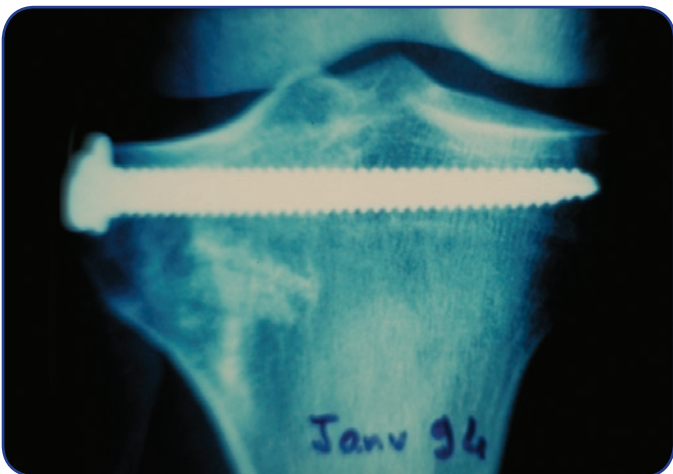


Fig 2: 15 months Post-op X'Ray

Fig 2: 15 months X'Ray after operation. The graft is almost entirely resorbed and initial bone defect restored. Bone trabeculae are visible in place of the ceramics indicating normal bone remodeling.

Case 4

Astragalus neck fracture (53 years old man).

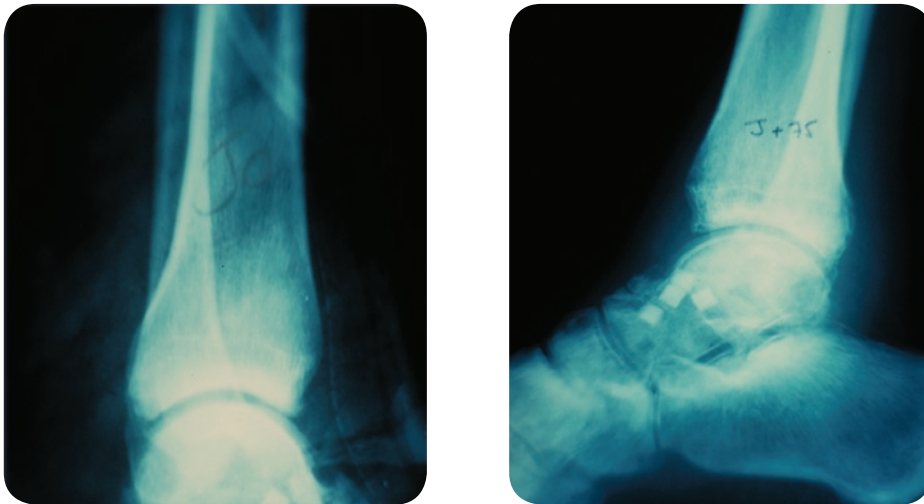


Fig 1: 2.5 months Post-op X'Ray

Fig 1: 2.5 months X-Ray after operation. In order to fill the bone defect due to the fracture and prevent risks of pseudarthrosis, Biosorb cubes were firmly inserted inside the fracture center.

Tightly filling the ceramics achieved satisfying primary stability. After 2.5 months, as the plaster was removed, fracture consolidation appeared clearly, as well as a good integration of the graft.

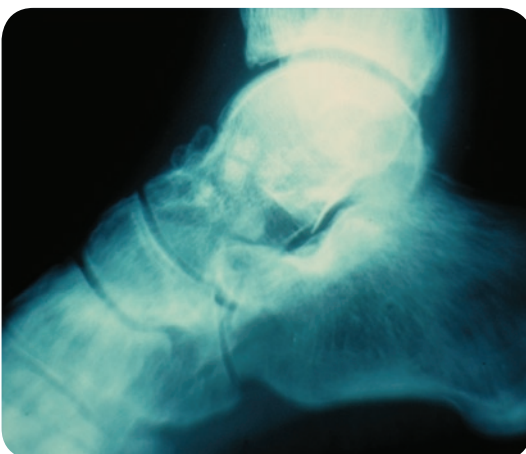


Fig 2: 8 months Post-op X'Ray

Fig 2: 8 months X-Ray after operation. A correct consolidation is obtained, as Biosorb cubes are almost entirely resorbed.

Case 5

Instrumented Idiopathic Scoliosis (CDI). After reducing the deformation, the postero-lateral bone graft has been performed with Biosorb TCP sticks (5x5x20mm).

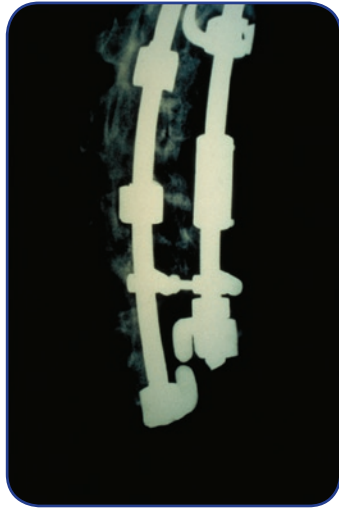


Fig 1: Post-operative

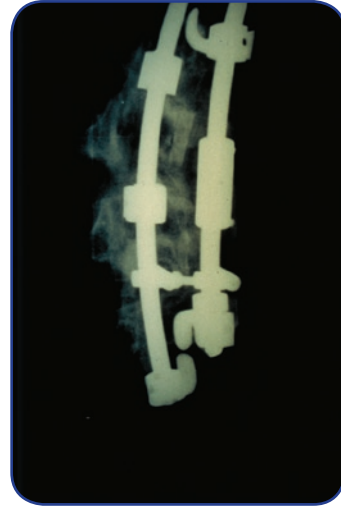


Fig 2: + 3 months



Fig 3: + 7 months

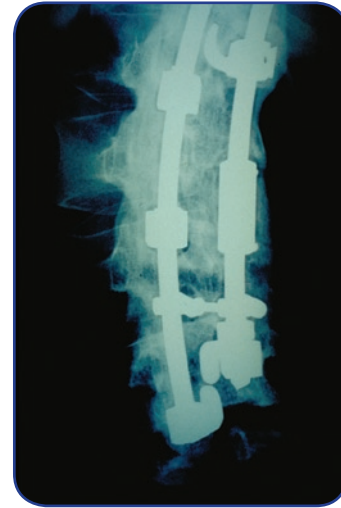


Fig 4: + 11 months

Fig 1: Post-operative X'Ray. Biosorb implants are visible.

Fig 2: 3 months post-operative. The implant loses little by little its density. No secondary motion, non radioluscent line is noted.

Fig 3: 7 months post-operative. The implant is almost resorbed.

Fig 4: 11 months post-operative. The implant is totally resorbed and cannot be observed anymore.

Case 6

Chondroma of the metatarsus III. The bone defect due to the resection of the chondroma of the metatarsus III was filled with granules of Biosorb.



Fig 1: Pre-op X'Ray



Fig 2: Post-op X'Ray



Fig 3: 6 months Post-op X'Ray

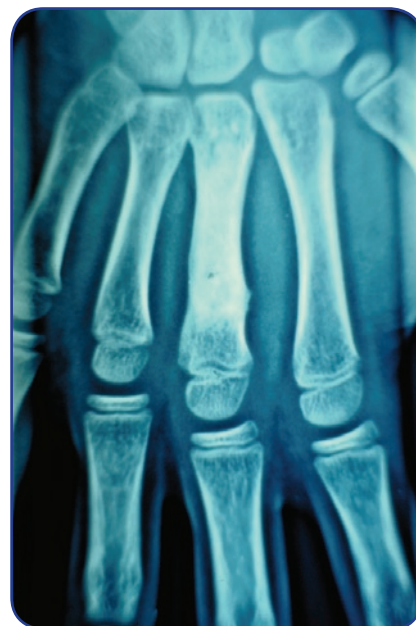


Fig 4: 1 year Post-op X'Ray

Case 7

Chondroma of the proximal phalanx of the index (8 years old female)
After resection of the tumor, the bone defect was filled with granules of Biosorb.

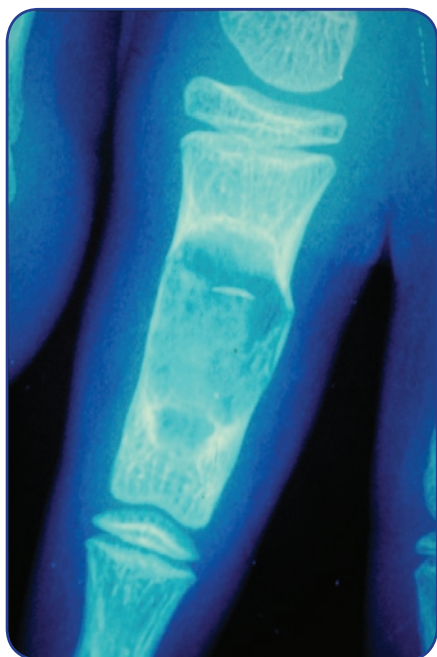


Fig 1: Pre-op X'Ray

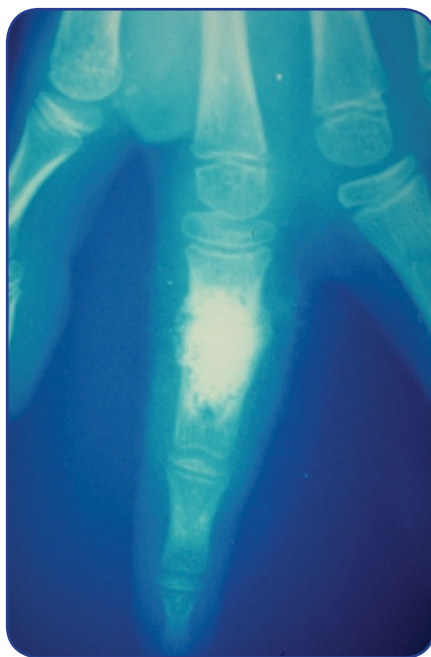


Fig 2: Post-op X'Ray

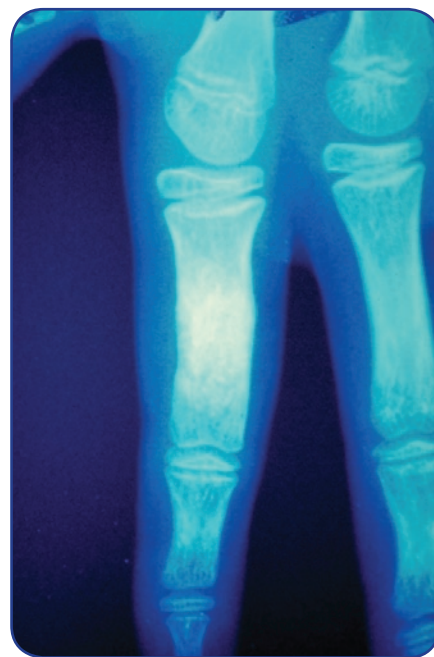


Fig 3: 4 months Post-operative X'Ray



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