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Neocement®

CHITOSAN and CALCIUM PHOSPHATE BONE CEMENT

RAW MATERIALS

- Chitosan
- Hydroxyapatite
- Biphasic Mixtures (HA+BTCP)

MEDICAL DEVICES

- 3D Bone Substitutes
- Injectable Bone Substitutes
- Bone Cement
- Wound Dressing
- Membranes

COATINGS

- Hydroxyapatite (HA)
- Titanium (Ti)
- Double Layer (Ti+HA)
- Triple Layer (Ti+Ti+HA)
- PVD
- Anodizing

CE1011

B-Ce_Nc-Rev0.16

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Calcium Phosphate Bone cement

Neocement® is presented in 3 bottles containing:

- Liquid phase (water, citric acid and glucose)
- Chitosan
- Solid phase (β -TCP and TTCP)



Specifications

Working time ¹ (min)	2 to 5
Setting time ¹ (min)	8
Compressive Strength (MPa)	≥4

Final Composition

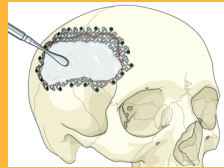
Hydroxyapatite $[\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2]$

¹Times are approximate and determined by simulated clinical use



Neocement® is bioactive and it has a low exothermic setting temperature

- Does not induce tissue necrosis
- Can be molded into desired shapes
- Has no toxicity or carcinogenic effects
- Promotes immediate stabilization of fractures



Neocement® is BIOCOMPATIBLE
due to its chemical composition similar to bone

Neocement® is EASY to APPLY
and it remains at the injury site



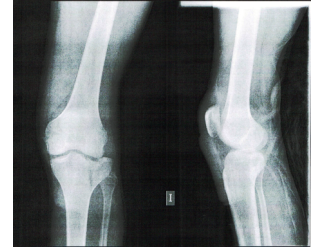
Neocement® is MUCOADHESIVE
due to the presence of chitosan, giving it excellent handling properties

CASE #1

21 years old Male with
Crushing tibial plateau fracture and risk of infection

Surgical procedure

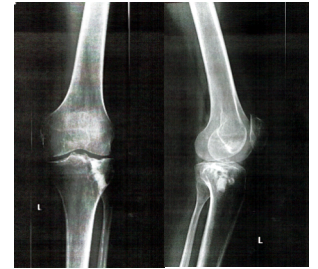
Fracture reduction and osteosynthesis with cannulated bone screw and washer. Total bone defect filling and external meniscus suture.



Pre operative X-Ray

Follow up after 1 year

- Implant radiopacity confirmed.
- Significant implant resorption reported.
- No migration of the bone substitution reported.
- No loss of contact with native bone.
- New bone formation was reported.
- Fracture consolidated.



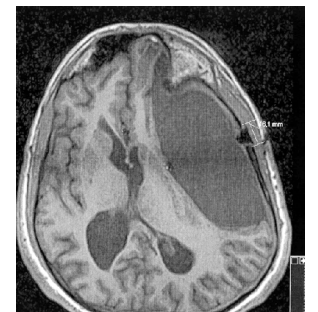
6 months clinical follow up X-Ray

CASE #2

21 years old Male with
Arachnoidal Cyst with size of bone defect of 14mm.

Surgical procedure

Endoscopic cyst fenestration.
Total bone defect filling with bone substituted implanted in contact with cancellous bone.



6 months clinical follow up MRI

Follow up after 6 months

- Implant radiopacity confirmed.
- Low implant resorption reported.
- No migration of the bone substitution reported.
- No loss of contact with native bone.
- New bone formation was reported.
- New bone density/quality: 90% in relation with native bone.
- No fracture consolidation reported at this stage.