A revolution in bone grafting

“BonAlive® is osteoconductive with osteostimulative properties - accelerating bone remodelling”

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Getting further with BonAlive® granules

BonAlive® is a fully synthetic osteoconductive and osteostimulative* bone graft substitute that actively promotes new bone formation and inhibits bacterial growth. BonAlive® is a biomaterial with over 15 years of proven safety and performance for bone cavity filling in orthopaedic and head and neck surgery. The composition of BonAlive® (S53P4) by weight is: SiO₂ 53%, Na₂O 23%, CaO 20% and P₂O₅ 4%.

BonAlive® has been used with great success for treating bone defects derived from:

- Benign bone tumours
- Fractures
- Chronic bone infections

The clinical advantages of BonAlive®

Osteostimulation
Effectively promotes the growth of new bone

Slow resorption
Encourages long-term bone growth

Safe
Fully synthetic and resorbable

Bacterial growth inhibition
Effectively prevents the growth of clinically relevant bacteria

BonAlive® inhibits bacterial growth

BonAlive® is a bone graft substitute that inhibits bacterial growth. Studies have shown that the material has a bacterial growth inhibiting effect on a vast number of anaerobic and aerobic bacterial species that are related to ENT, CMF and orthopaedic complications.

The average growth of 29 bacterial species grown together with S53P4.

The growth of most species was already totally inhibited at the first time point (1d). 3 = good growth (positive control), 2 = moderate growth, 1 = weak growth, 0 = no growth.

BonAlive® granules in an easy-to-use applicator

*non-osteoinductive
Seven patients (3 females and 4 males in the age of 30-70 yrs) with radical cavities due to chronic suppurative otitis media or cholesteatoma surgery were treated by filling the cavities in the mastoid area with BonAlive® granules. The area was filled with ~5 gr of granules (500-800 µm) of BonAlive® and closed with a musculoperiosteal flap and temporalis muscle fascia to keep the BonAlive® granules in position. During the follow-up; 22-98 months (mean: 57 months) the radical cavity was totally eliminated in two patients and in five patients reduced to a small dry cavity. No BonAlive®-associated infection or extrusion of the material was seen.

BonAlive® in Orthopaedic surgery

BonAlive® has been used successfully for more than a decade to fill bone cavities after evacuation of bone tumours and in fracture management. It has been clinically proven that the long-term performance of BonAlive® is equivalent to that of autogenic bone.4

BonAlive® induces a high but balanced local bone turnover by actively participating in the bone formation process.1 The high level of bone remodelling can be seen e.g. in paediatric patients.13 The proven performance of BonAlive® shows that it is well tolerated and a safe bone graft substitute, which can be used to treat versatile bone defect indications.

Indications:
• Bone cavity filling

BonAlive® in Head and Neck surgery

The use of BonAlive® has provided successful and reliable long-term clinical outcomes for over 15 years in frontal sinus surgery, mastoid cavity obliteration and repair of skull base defects.5,14,15 BonAlive® has shown excellent performance in the treatment of chronically infected frontal sinuses and mastoid cavities.5,15 BonAlive® is a safe material that can be used in close proximity to the dura after coverage with fascia lata.14

Indications:
• Bone cavity filling in cranio-maxillofacial area
• Frontal sinus obliteration
• Mastoid cavity obliteration

Patient case
BonAlive® granules in mastoid cavity obliteration15

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Patient cases
BonAlive® granules in mastoid cavity obliteration15

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BonAlive® granules are available for Orthopaedic and CMF applications:

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References: