

# Histology of surgically removed overgrown osteochondral rib grafts

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**Introduction:** Osteochondral rib grafts are most commonly used for mandibular condylar replacements. However, when used in growing patients, unpredictable growth of the constructed condyle/ramus is a common complication. Clinically two types of overgrowth, linear or exuberant, have been described. **Purpose:** In order to investigate growth disorders associated with osteochondral rib grafts in children, overgrown grafts were examined histologically. **Patients and Methods:** The material consisted of seven samples (six patients) of osteochondral rib grafts, that had been removed due to overgrowth. **Results:** Examination revealed that the clinical type of overgrowth was not related to any specific microarchitecture, which in itself, showed considerable variation. In three of the samples, a typical endochondral ossification zone was seen and in two others, signs of metaplasia, i.e. a gradual transformation of the cartilage cells into osteocytes, were noted. **Conclusions:** The study reveals that the c