Experimental endoscopic intrauterine surgery for craniofacial malformations such as the cleft lip and palate

INDICATION FOR FETAL SURGERY: The widespread use of high-resolution ultrasound in prenatal diagnosis allows nowadays an accurate and early diagnosis of congenital malformations. Some of these can be corrected surgically. In certain cases intrauterine surgery could present functional and aesthetic advantages or be even lifesaving. Due to the extreme sensitiveness of the fetal patient and the fetal membranes, only some defined anomalies currently meet the criteria for intrauterine surgery. However, the list can change in the future since prenatal diagnosis, technical advances, and knowledge of pathophysiology improve constantly.

ENDOSCOPIC INTRAUTERINE SURGERY: Additionally, the recent development of endoscopic intrauterine surgery represents a new and more careful possibility for intrauterine surgery. Endoscopic procedures could avoid the disadvantages of open intrauterine surgery and thus make fetal operations safer, in life-threatening as well as in non-life-threatening malformations such as cleft lip and palate (CLP). The main advantages of these procedures are (1) scarless wound healing and bone healing without callus formation that leave to expect normal growth of the midface and (2) lower fetal and maternal morbidity. DISCUSSION: Based on the results achieved until now, it can be stated that at present the
intrauterine operation of CLP on humans cannot be recommended. The high morbidity and mortality risk for mother and fetus cannot be counterbalanced by the unsatisfactory results of a prenatal operation. CONCLUSION: In this study first results of an experimental investigation with the new endoscopic techniques are presented, whereby the possibilities for optimization and quality improvement of the intrauterine surgical procedures are analyzed in detail.