



Use of intra-cardiac 1% Lidocaine for fetocide: our experience

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Objective

In United Kingdom, termination of pregnancy for fetal abnormality can be performed at any gestation if there is substantial risk that was the child born it would suffer from such physical or mental abnormalities as to be seriously handicapped. In accordance with RCOG guidance, fetocide should be routinely offered from 21+6 weeks of gestation. Intracardiac potassium chloride (KCl) is commonly used method to ensure fetal asystole. Other methods of foeticide include intra-amniotic or intrathoracic injection of digoxin (up to 1 mg) and umbilical venous or intracardiac injection of 1% lidocaine. We report our experience with intracardiac administration of 1% lidocaine as safe and effective method for late termination of pregnancy.

Methods

All cases of fetocide (>21weeks of gestation) between January 2017 and April 2018 were retrieved from the fetal medicine unit database at Royal London Hospital, London. All foeticides were performed by fetal medicine consultants by intracardiac injection of 1% lidocaine.

Results

During the study period a total of 25 foeticides were performed. The mean gestational age for the procedure was 25.7 weeks (range 21+3 to 36+5 weeks). Fetal weight range was 302gm to 2411gm, with the mean weight of 935gm. Indications included cardiac abnormality (44%), brain abnormality (32%), and genetic abnormality (16%). Other rare indications included termination for very preterm rupture of membranes and late diagnosis of spina bifida. The mean volume of lidocaine 1% required to achieve fetal asystole was 17ml (range 7-40ml). Complete asystole was achieved in all but one case where further administration of 8ml of KCL was required. This can be explained by advanced fetal gestation in this case with estimated fetal weight of 2411gm. No maternal complications occurred.

Conclusion

Our results show that lidocaine is effective in achieving complete cessation of fetal heart activity. Lidocaine is a local anaesthetic hence it may reduce fetal pain and awareness of the procedure. It is a cheap, non-controlled drug and has a safer profile than KCl. The total dose required for fetocide at any gestational age is well below the adult toxic dose range. Our results suggest that the use of lidocaine for the foeticide procedure is preferable to the use of KCl.