Is it possible to learn chorionic villous sampling and amniocentesis safely in a short period of time

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Short-term training programs in chorionic villous sampling (CVS) and amniocentesis on pregnant women are scarcely available and adequate training remains an issue worldwide. An intensive international training program is necessary.

The reflection on the learning of techniques and tutor modality (time, place, method, number of procedures and competency) must be implemented in every country in which the necessary experts are available to teach invasive prenatal procedures.

Observing prior to perform is essential as in every other procedures to be learnt, so fellows should ideally start performing them only after a period as first assistants and ideally on non-complicated cases.

Learning invasive prenatal procedures can be based on specifically designed equipment such as training mannequins. However, the optimal training model is still a traditional one, requiring direct interaction with the patient in vivo and supervised by a tutor.

It is not possible to state an exact number of procedures required to maintain competence of certified operators. External audit of practice may be the solution.

According to RCOG 2010 at least 30 guided procedures in a year for CVS or amnio before starting to perform independently are required.

A total of 236 trainees rotated over at a single high-volume perinatal referral center (Microcitemico Hospital, Cagliari) over a 35-year period (1983-2018) The average length of stay was 2.4 weeks. The supervising physician was consistent throughout the entire study period. The fetal loss rate (loss within two weeks of the procedure) occurred in 3 of the 3,643 cases. Obstetricians were from 39 different countries represented 5 different continents. All rotating physicians were trained as obstetrician gynecologists at their home institution.

Figure 1. Fellows (n236) tutored in CVS in Microcitemico Hospital, Cagliari, 1983-2018

Conclusion

Hands-on training in invasive prenatal procedures is scarce worldwide. The global operative experience that the training at Microcitemico Hospital in Cagliari offers is feasible, sustainable and has a lasting impact on physicians conducting invasive fetal procedures. This rare training experience not only creates clinicians competent in CVS and amniocentesis, but fosters adaptive shared experiences in an international cohort of obstetricians that practice prenatal diagnosis across the world.