

EXPERTISE REPORT IN DISPUTED PATERNITY CASES WITH TWO OR MORE CHILDREN.

A.L.SIMÕES (Dep. Genética Fac. Med. Ribeirão Preto USP);
N.N.R. SALARU (Dep. Medicina Legal Fac. Med. USP/IMESC).
São Paulo, Brazil.

In expertise reports, when it is not possible to exclude an alleged father (AF), the probability of paternity should be presented, as far as multiple tested systems provide a falsely accused man with a 95% probability of obtaining evidence of non paternity. Although most of disputed paternity cases are composed of trios (AF, mother and child), cases with more than one child are not rare.

Concomitance of non exclusion results of AF in relation to a brotherhood deserves an additional treatment.

In this paper, only the situation involving a quartet (AF, mother and two children) is focused (considering more than two children would produce an extremely high number of possible alternatives).

When the same man is involved in two independent trios, e.g. he is indicated by two different women in relation to their children, it is reasonable to use the multiplication of the paternity indexes, in order to evaluate the probability of paternity in relation to both children. However, when mother indicates the same man as father of her children, the situation is quite different because mother's indication is being tested twice.

We propose to evaluate the probability of concomitant paternity, comparing the probability to observe such quartet

with the probabilities of: (a) AF being the father of the first child; (b) AF being the father of the second child; (c) the father of both children is a different man; (d) both children have different fathers.

Index of concomitant paternity is obtained by the division of the probability of AF being the father by the total of the other probabilities. Such value is usually higher than the product of single paternity indexes.

We suggest to inform in the expertise report not only the probabilities of paternity of AF in relation to each child (calculated as if they were from different trios), but also the probability of his concomitant paternity.

6. DNA polymorphisms in criminal investigation

