Paediatric doctors' experience and knowledge of the initial management of neonatal ambiguous genitalia

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Ambiguous genitalia

• Neonatal ambiguous genitalia can herald sensitive, time-critical, and life-threatening diagnoses

• Paediatric doctors must be competent in their management

• However, ambiguous genitalia are rare, limiting clinical exposure

• We assessed paediatric doctors' knowledge of and confidence in managing this condition

Methods

• A questionnaire was circulated to paediatric doctors at six paediatric teaching hospitals

• It established doctors' clinical experience of ambiguous genitalia

6. How many cases of neonatal **ambiguous** genitalia have you seen? (see *Note* above)

None ☐ Four ☐
One ☐ Five ☐
Two ☐ More than five ☐
Three ☐

7. How many cases of neonatal ambiguous genitalia have you been actively involved in the management of?

None ☐ Four ☐
One ☐ Five ☐
Two ☐ More than five ☐
Three ☐

• A clinical vignette followed by multiple choice questions (MCQ) assessed knowledge of diagnostic tests and differential diagnoses

Please read the case below:

You are the only paediatric doctor present at the birth of an Irish couple's first baby after an uneventful pregnancy. A 3.5kg baby is born in good condition by spontaneous vaginal delivery. You and the midwife note that the genitalia look atypical. There is a 1.8cm long phallus with a midshaft diameter of 1cm. There is a visible patent urogenital opening near the base of the phallus. The labioscrotal folds are pigmented with rugosity of the overlying skin. The folds look partially fused in the midline. You cannot feel any gonads. There are no other findings of note. Neither you nor the midwife can tell from looking at the genitalia what the biological sex of the baby is. The parents ask you if they have had a girl or a boy. The midwife asks you what the next steps are.

• It then used a Likert scale to assess their confidence in its management (1 = I am very unconfident, 5 = I am very confident)

17. Please indicate, on a scale from 1-5, how confident you would be in the overall management of a case such as this (1 = I would feel very unconfident, 5 = I would feel very confident).

☹ 1 2 3 4 5 ☺

• An educational module was designed and the questionnaire re-administered.

Experience

• Response rate was 100% (n=42; 26.2% male; 71.4% (n=30) junior trainees, 14.3% (n=6) senior, 14.3% (n=6) consultants)

• 42.9% (n=18) had never seen ambiguous genitalia

• Junior trainees had seen fewer cases (M=0.9, SD 1.4) than senior (M=2.4, SD=2.2), (t(14.7)=-2.2,p=0.04)

• 33.3% (n=14) had helped manage a case

• 21.4% (n=9) had been the first to review an infant with ambiguous genitalia

•11.9% (n=5) the first to inform parents of the finding

Confidence

• On 1-5 Likert scoring, doctors were not confident in the overall management of ambiguous genitalia (M=2.5), in discussing findings with parents (M=2.9), or in examining ambiguous genitalia (M=2.9)

• Seniority, number of cases seen, and tertiary experience did not significantly influence confidence levels

• MCQ responses were correct a mean of 64.0% of the time, and improved to 83.4% when re-tested after the educational session ($p<0.01$)

• Seniority, number of cases seen, and tertiary experience did not significantly influence performance

• Reported confidence levels did not improve after the educational session.

Discussion points

• Paediatric doctors, regardless of seniority, have insufficient knowledge and confidence to manage neonatal ambiguous genitalia. This reflects limited clinical exposure

• As we cannot rely on experiential learning, paediatric doctors must receive targeted educational sessions on the management of ambiguous genitalia to improve their knowledge of this rare condition