Correspondence

Triple aneuploidy

Sir,

Webb et al (J Med Genet 1984;21:232) state “This is the first reported case of triple aneuploidy in a male, that is, additional chromosomes X, Y, and 18” while publishing their very interesting case report on 49,XXYY,+18 in a liveborn male.

However, there is a report of triple aneuploidy, that is, additional chromosomes X, Y, and 8 by Sutherland et al1 (cited by me2) in a mosaic state, mos48,XXYY/49,XXYY,+8, found at paediatric necropsy.

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A possible mechanism underlying the sex selectivity of neural tube defect

Sir,

Dr Seller and Professor Nevin1 find that the recurrences of neural tube defect (NTD) in the presence of vitamin supplementation are predominantly in male fetuses. It has been suggested that female anencephalics are more frequently associated with environmental determinants than are male anencephalics.2 Seller and Nevin remark that their finding supports the related supposition that the less commonly affected sex would respond less well to environmental therapy. They add “This fact is difficult to explain since the neural tube closes before sex differentiation has occurred”.

I should like to offer a form of explanation. I have suggested that the sex of the human zygote is partially controlled by the level of maternal gonadotrophin at the time of conception, high levels being associated with female offspring.3 4 If this is so, it would seem that the mean time of conception and of fetal developmental stages relative to ovulation, and to the whole sequence of maternal endocrinological events following it, is earlier in the case of males than females. In other words, the sequence of maternal events occurs at slightly different developmental stages, on average, for fetuses of the two sexes (at least early in pregnancy). If this is so, then the effect of therapy may be to alter the rate at which one of these sequences occurs so as better to synchronise the mother with the fetus. From conception on, male fetuses—or rather those fetuses which will later turn out to be males—are perhaps better synchronised on average with the sequence of maternal events than are female fetuses, from the point of view of NTD.

Many congenital malformations are sex selective,5 and one might wonder whether this is related to the proposed difference between male and female fetuses in regard to developmental timing vis-a-vis maternal timing.

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Clinical features of homozygous α2(I) collagen deficient osteogenesis imperfecta

Sir,

I have read with interest the above article by Nicholls et al (J Med Genet 1984;21:257–62). I would, however, like to take issue on the comments made about the teeth. On page 260 it is stated in the text “... relatively normal teeth without dentino-genesis” and the caption for fig 5(e) mentions

References


A possible mechanism underlying the sex selectivity of neural tube defect.

W H James

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