

Does the rate of testicular maldescent (UDT) parallel the rising rate of hypospadias? More reasons to worry?

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Introduction

There has been worldwide concern at rising infertility, rising rates of gonadal malignancy, and widespread observation worldwide of oestrogenic effects in wildlife.

The authors have previously presented data showing an increasing rate of hypospadias in this region.

We sought to test the theory that there would also be an increased rate of testicular maldescent during the same time period.

Method

The study was performed as a retrospective case note review and review of medical record coding. Annual presentations with undescended testis and hypospadias were compared with ACT birth rates over a thirty year period, and per capita incidence of the malformations were plotted.

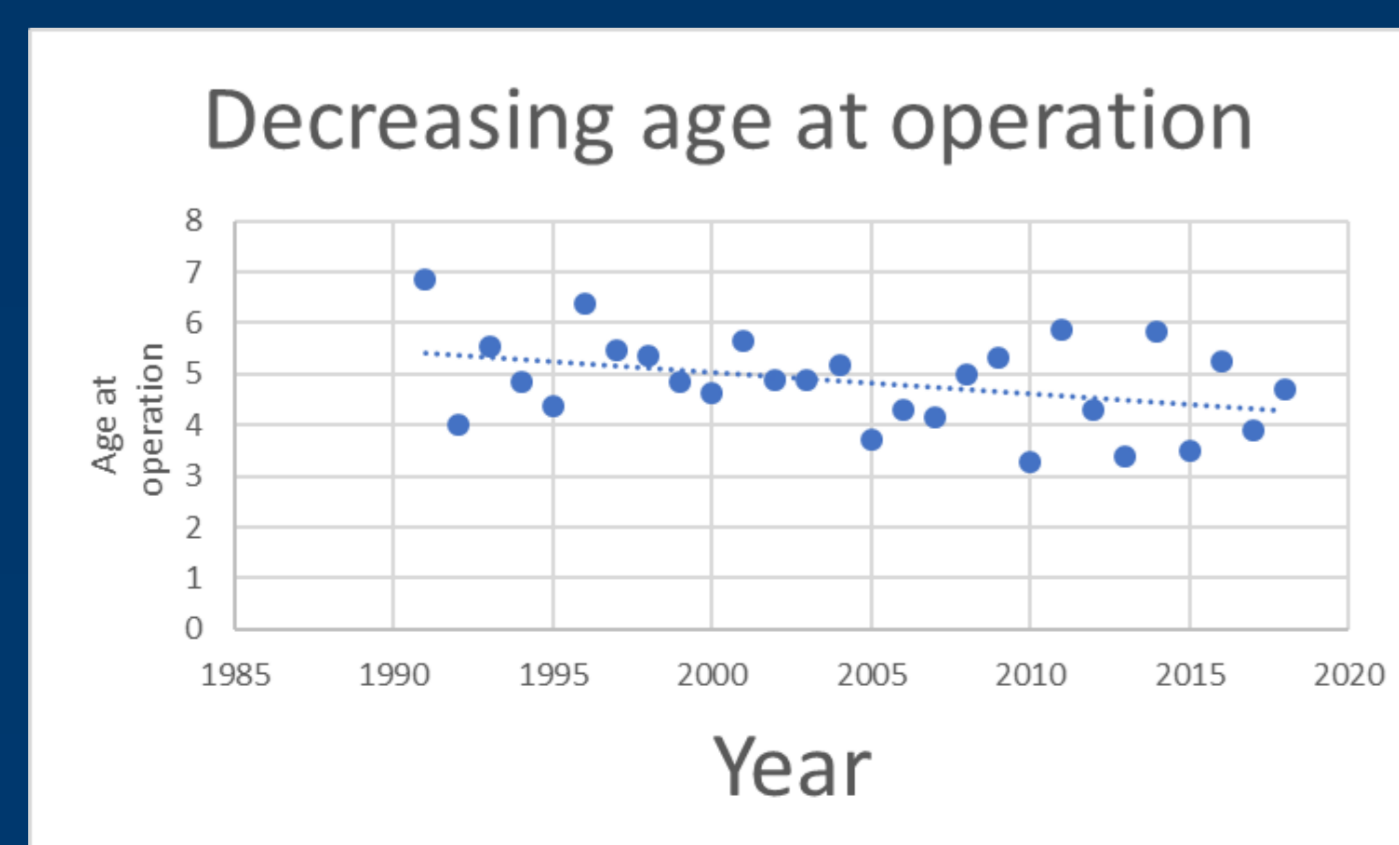


Figure 4: Falling age at operation.

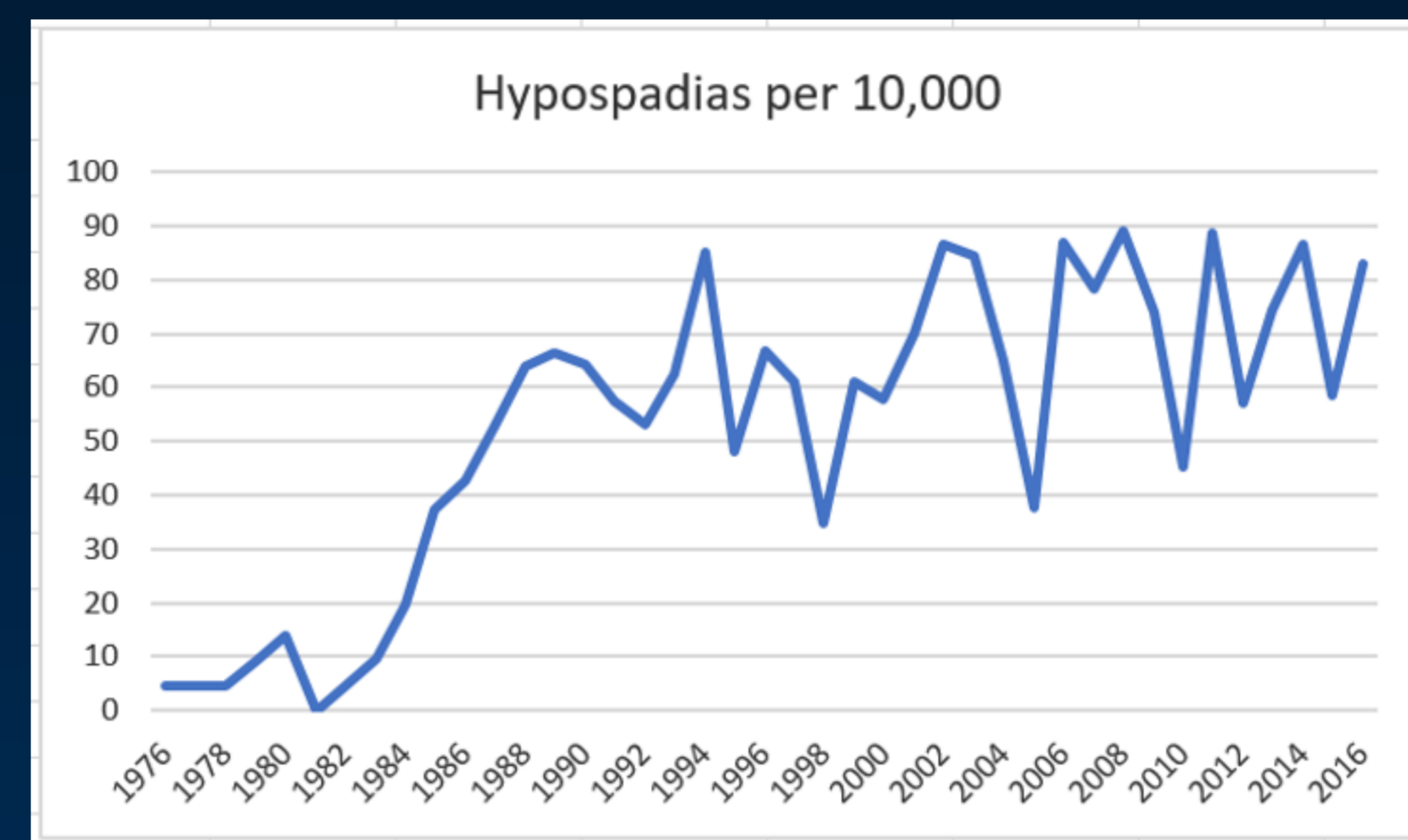


Figure 1: Annual incidence hypospadias

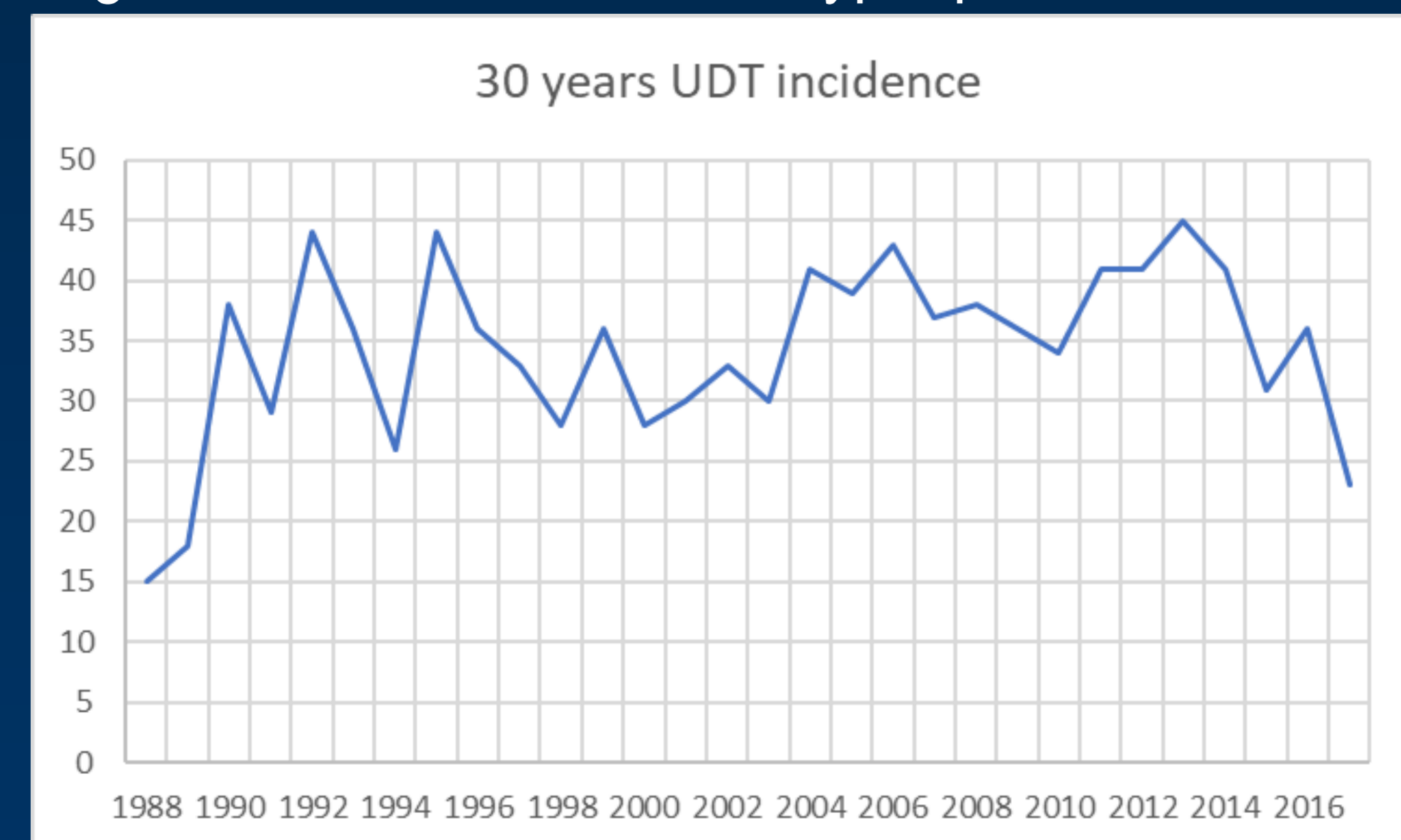


Figure 2: Annual incidence undescended testis.

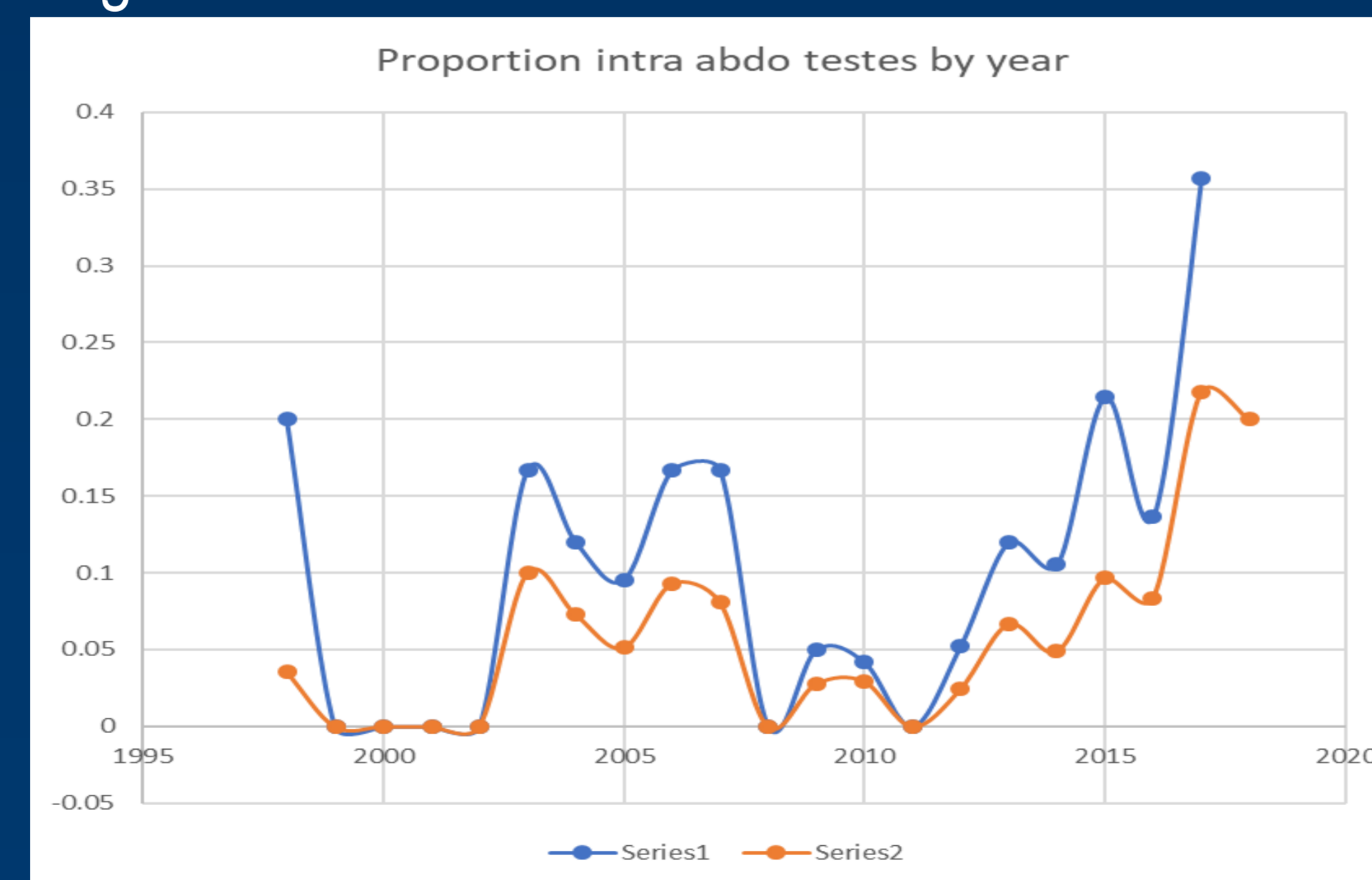


Figure 3: Proportion of testes intra-abdominal (severe), corrected (blue) and uncorrected (orange) for missing data. Overall 2.7% of UDT had hypospadias, against a background 0.8% hypospadias in the general population.

Discussion

We have previously shown that the annual rate of hypospadias is increasing in the ACT by 0.9% per annum over the last 30 years. The data on undescended testis is more noisy, and although there is an upward trend in incidence, it is not significant. Interpretation of the undescended testis data is complicated by apparent changes in data recording 20 years ago, and by an easy confusion in coding between ascending testes and congenitally undescended testes. We do see however that the age of operation has been falling slightly over the study period. (See figure 4.) This might support the contention. It may also be due to changes in policy directed toward achieving earlier operation with the aim of improving fertility and reducing malignancy risk.

Prospective data collection on this subject will unfortunately be necessary to prove the contention. Looking indirectly at not only the incidence but the severity of the undescended testis it's evident that higher intra-abdominal testis is now more common than 30 years ago (see figure 3.) There are also more undescended testes associated with hypospadias, and these are more likely to be severe hypospadias. There is no increased incidence of bilaterality of undescended testis however.

Conclusion

This study is consistent with increasing rates of genital malformations reported here and elsewhere consistent with the effects of environmental pollutants. Ongoing prospective data collection is urgently encouraged, as is serious consideration of eliminating sources of potential teratogens. The ACT's ban on single-use plastic bags is a good start.

