

EXECUTIVE SUMMARY

Background

The herbicide 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) which contained the dioxin 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) as a contaminant was used extensively in New Zealand to control gorse. There has been longstanding community concern over the possibility of health effects, including birth defects, on the local population from its manufacture between 1962 and 1987 at the former Ivon Watkins-Dow (IWD) chemical plant in Paritutu, New Plymouth.

Methods

During 1965-71, a midwife at Westown Maternity Hospital (WMH) in New Plymouth, collected data on the occurrence of the birth defects in births in the hospital. These unpublished data have been used to compare the prevalences of birth defects in New Plymouth with those reported in other New Zealand hospital and population based national and local studies for the period prior to the establishment of the New Zealand Birth Defects Monitoring Programme (NZBDMP). From 1980 to 1989 data from the NZBDMP were used to compare the prevalences of birth defects in New Plymouth to those reported in other health districts. Prevalence rates and 95% confidence intervals were calculated.

Results

During 1965-71, the overall rate of birth defects, and specifically talipes and congenital dislocation of the hips (CHD), at the WMH was significantly higher than the rates reported from some other studies in New Zealand at that time.

However, there was no difference between the rates of spina bifida, Down syndrome, congenital heart defects, and facial clefts. An association has been reported between TCDD and spina bifida (Institute of Medicine, 2009).

Data from the NZBDMP showed the rate of birth defects in New Plymouth was consistently higher than the national average and many other areas during 1980-89. The difference was likely due to an ascertainment bias with exceptionally high rates of CHD and talipes in New Plymouth.

Since 1964, an orthopaedic surgeon in the Taranaki region, had 'dedicated himself to ensuring every baby born in Taranaki Base Hospital's maternity unit has been, and will continue to, be tested for displaced hips'. Taranaki was also reported to have the highest number of orthopaedic surgeons per head of population in New Zealand. A previous study found that the rate of CHD was more than three times the rate at National Women's Hospital, the major referral centre in Auckland.

Conclusion

These data provide no evidence of an effect on the rates of birth defects from 2,4,5-T/TCDD exposure in New Plymouth.