

Oral presentation

Open Access

The development of scoliosis following pinealectomy in two species of chicken with different growth rates

M Beuerlein, Keith Bagnall*, X Wang, J Wilson, James Raso and M Moreau

Address: Department of Surgery, University of Alberta, Edmonton, Alberta, Canada, T6G 2H7

Email: Keith Bagnall* - kbagnall@med.ualberta.ca

* Corresponding author

from 4th International Conference on Conservative Management of Spinal Deformities
Boston, MA, USA. 13–16 May 2007

Published: 12 October 2007

Scoliosis 2007, **2**(Suppl 1):S26 doi:10.1186/1748-7161-2-S1-S26

This abstract is available from: <http://www.scoliosisjournal.com/content/2/S1/S26>

© 2007 Beuerlein et al; licensee BioMed Central Ltd.

Objective

To determine whether differences in growth rate affects the development of scoliosis following pinealectomy in young chickens.

Study design

Eighty newly-hatched White leghorn and forty-two newly-hatched Mountain Hubbard chickens were divided equally into control and experimental groups. The experimental chickens underwent pinealectomy. All chickens were observed for five weeks during which time radiographs were taken weekly to assess the development of scoliosis. Weight and spinal length measurements were also gathered.

Results

Mountain Hubbard chickens grow much faster than White Leghorn chickens during the initial stages of development. After four weeks, the incidence and severity of scoliosis is not significantly different between the two species. However, prior to the fourth week, the Mountain Hubbard chickens had a significantly higher incidence and severity of scoliosis than the White leghorns.

Conclusion

These results indicate a relationship between the percentage growth rate and scoliosis curve development in pinealectomised chickens. This might be a useful factor to consider in the development of successful treatment strategies for scoliosis curve development in humans.