# Polythelia and supernumerary cervical and thoracic vertebrae

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We present the case of an 11-year-old boy with an elongated neck and chest. Both the cervical and the thoracic spine carried one supernumerary vertebra. This was accompanied by symmetrical polythelia (i.e.additional nipples). To our knowledge this is first publication of a case presenting with this collection of features.

## Case report

An 11-year-old boy presented to the Trauma Unit at Red Cross Hospital after sustaining an injury to the neck area. Radiographs of the cervical spine showed no signs of trauma. However, it was noted that the cervical spine comprised 8 vertebrae instead of the usual 7 (Fig. 1). In addition, the thoracic radiograph demonstrated 13 vertebrae (Fig. 2). On physical examination the patient was also found to have two sets of nipples, approximately 4 cm from each other (Fig. 3).

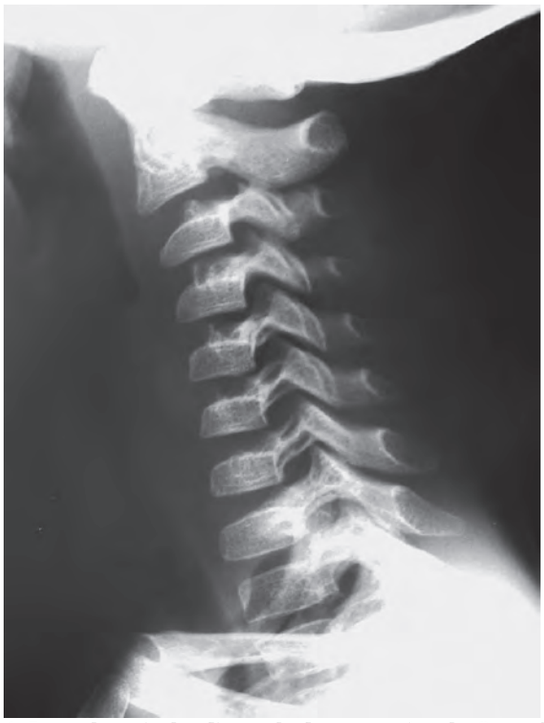

***Fig. 1. Lateral cervical radiograph, demonstrating the 8 vertebral bodies.***

## Discussion

Extra vertebrae in the neck region are rare, and the combination of symmetrical hypertelism and elongated chest has not, to our knowledge, been documented before.

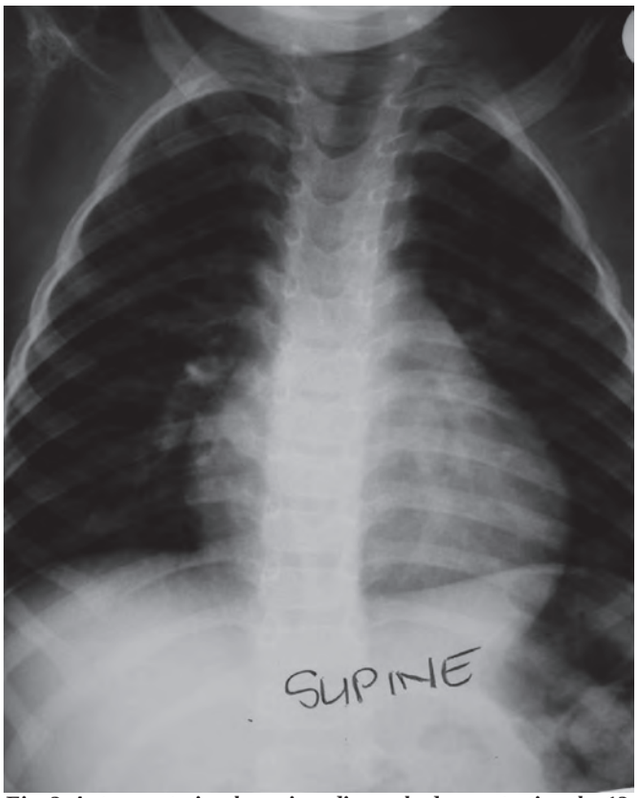


***Fig. 2. Anteroposterior thoracic radiograph, demonstrating the 13 vertebral bodies, all with ribs attached.***

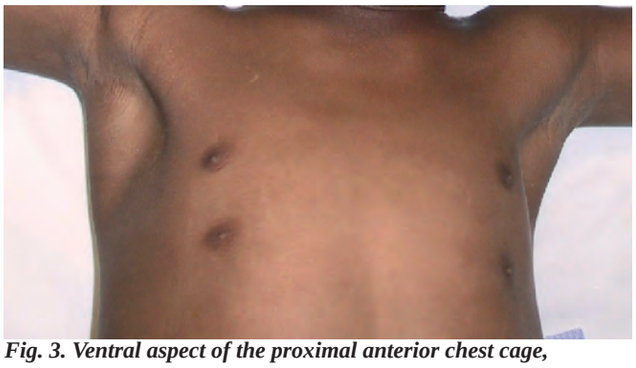

***Fig. 3. Ventral aspect of the proximal anterior chest cage, demonstrating the two sets of nipples.***

The vertebral bodies are formed from the 4th week onwards as a result of migration of cells from the sclerotome regions of the somites in the ventromedial, ventrolateral and dorsal direction. Chondrification takes place from the 6th week onwards.[1]

Mammary buds begin to develop during the 6th week as solid downgrowths of the epidermis into the underlying mesenchyme.[2] Supernumerary nipples or polythelia are developmental abnormalities located along the embryonic mammary lines. This is the most common form of accessory breast tissue, found in 0.22 - 5.6% of people, depending on various factors such as gender, ethnic group and geographical area.[3] They are usually sporadic and rarely familial and may be associated with kidney anomalies.[4] They may be found anywhere along the milk line but most often appear below the usual site of breast placement. They are occasionally symmetrical or multiple, but are most often solitary.[5]

Polythelia and segmental costovertebral malformations have been described in single case in association with neural tube defects.[6] However, a case such as ours, presenting with supernumerary cervical and thoracic vertebrae in addition to polythelia, has not to our knowledge been reported previously.

The case could be described as a long neck and an elongated trunk. The combination of the extra thoracic vertebral body and the doubling of the nipples suggest that the duplication occurred at the level of the 4th thoracic vertebral body, occurring somewhere between the 4th and 6th week of intrauterine development.

## References


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