The autonomic nervous system is an essential part of the nervous system that is largely responsible for the normal day-to-day functioning of the body. This part of the nervous system, like many other parts of the body as a whole, is subject to anatomical variability. The following work evaluated the cervicothoracic ganglion (CTG) because of its important clinical relevance both medically and osteopathically. The form and topography were described providing precise measurements between the CTG and certain clinically important anatomical landmarks, namely; the anterior tubercle of the transverse process of the sixth cervical vertebra, the first costovertebral articulation and the vertebral artery.

Forty-two adult cadavers were dissected, 22 male and 20 female. Five main forms of ganglion were documented; spindle (31.9%), dumbbell (23.2%), truncated (21.7%), perforated (14.5%) and inverted-L (8.7%).

The means for length, width and thickness of the CTG were 18.5mm, 8.2mm and 4.5mm respectively. The dimensions were found to be larger in the males than the females and on the left sides as compared to the right. The mean shortest distance between the ganglia and the vertebral artery was 2.8mm (range 0-18.12mm), whilst the mean shortest distance to the anterior tubercle on the sixth cervical vertebra was 25.7mm (range 13.49-38.85mm) and to the first costovertebral articulation was 1.7mm (range 0-14.39mm).

There is great variability in the morphology of the CTG with five common forms consistently seen. The relation to the vertebral artery may influence the form of the ganglion as was seen by the two previously undocumented forms; truncated and perforated. It is this juxtaposition of the ganglion and the vertebral artery that is considered of clinical importance during any form of intervention in the proximity of these structures.

It can be expected that the information revealed by this study will also be of importance to osteopaths who may be performing osteopathic manipulative techniques on any of the structures associated with the CTG itself. It is with this in mind that this study looked at the cervicothoracic ganglion as both an anatomical investigation and from an osteopathic viewpoint. The investigation, results and discussions are considered to be of significant clinical importance to anaesthetists, surgeons, neurosurgeons, anatomists and practising osteopaths alike.