

A Case with Anomaly of the M. subcostalis

Ryosuke MIYAUCHI* and Seiji NAGASHIMA**

*Department of Anatomy, Faculty of Medicine,
Nagasaki University*

(Director: Prof. Dr. Jun-ichiro SATOH)

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In an earlier paper, SATOH ('74) described the results of his study of the Mm. subcostales in man and monkey. In view of the relations to the Mm. intercostales and their nerve supply, as a rule they were considered to be independent muscles formed by the separation of one part of the muscle bundles of the Mm. intercostales internus (Eisler) which, instead of inserting into adjacent ribs, had extended further to other ribs.

A case of abnormal type by SATOH was found, however, in which this muscle appeared to be a separation from the M. intercostalis intermedius (Eisler) and will be presented here.

This condition was found in 1 case (number 777, male) during a study of the bodies of 10 Japanese. This case showed the additional abnormality of having large communicating branches between adjacent intercostal nerves. The muscle described here as being the M. subcostalis was found bilaterally in the same intercostal space with identical findings on each side.

This was a band-like muscle which arose from the upper edge of the third rib and crossed over the second rib to the lower edge of the first rib, where it became tendinous and terminated apparently by union and continuation into the origin of the M. intercostalis intermedius (Eisler). Inspection of the relation between this muscle and the underlying M. intercostalis (in the outer layer) showed that the M. intercostalis internus was absent in the first intercostal space so that the M. intercostalis intermedius was in direct contact with this muscle, but no fusion was seen between these two muscles except at the site of insertion. The M. intercostalis was found to be exposed beneath the pleura even in the second intercostal space, and the M. intercostalis internus and intermedius could not be separated so that the M. inter-

* 宮内亮輔 ** 長島聖司

costalis internus (Eisler) was felt to be absent. Such a condition, however, was not seen in the third intercostal space or beyond. Moreover, in the second intercostal space, this muscle was completely united with the underlying M. intercostalis, i.e., the M. intercostalis intermedius, and could not be separated.

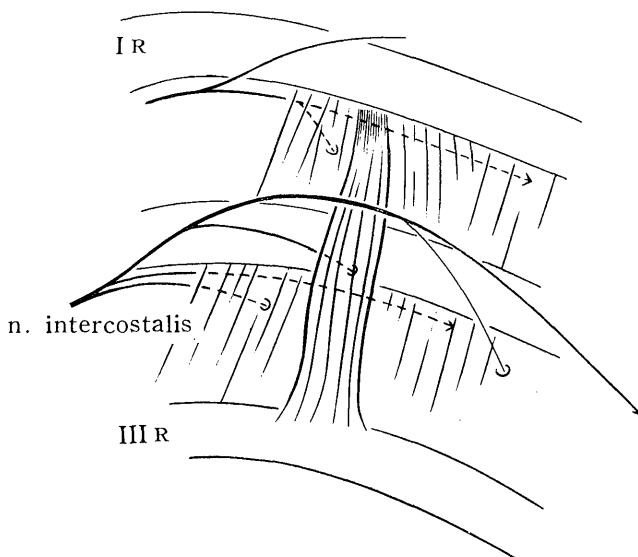


Fig. 1. (man, No. 777, ♂)

The nerve supply was by a branch of the intercostal nerve located in the second intercostal space. That is, the main branch of the intercostal nerve, after sending off a branch to the M. intercostalis externus, crossed over the second rib and ran lateralward along the upper edge of the second rib across the anterior surface of this muscle after which it descended again to the second intercostal space where branches were given off to this muscle and the underlying M. intercostalis. There was no contribution to the nerve supply by the first intercostal nerve.

Thus, in view of the relations to the M. intercostalis and the nerve supply described above, this muscle is felt to be part of the same muscular system as the M. intercostalis intermedius, and is further regarded to be the separation of one part of the M. intercostalis intermedius which had arose from the upper edge of the third rib and, instead of attaching to the second rib, extended further to insert into the first rib.

SATOH regarded as a rule the M. subcostalis as being formed by the separation of one part of the M. intercostalis internus or in rare cases the M. intercostalis intermedius, beyond adjacent ribs to insert into other ribs, and the presented case is the abnormal type indicated

by SATOH.

As pointed out by SATOH since the condition of nerve supply to the Mm. intercostales intermedius and internus is identical even though that to the M. intercostalis externus is different, the Mm. intercostales intermedius and internus are felt to be almost the same so that the fact that this muscle is derived from the M. intercostalis intermedius does not justify the conclusion that it is not the M. subcostalis.

We feel that this muscle is the M. subcostalis, and therefore it is concluded that these findings confirm the view of SATOH that there are rare cases in which the M. subcostalis is derived from the M. intercostalis intermedius.

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