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Siphuncular structure in Ordovician endocerid cephalopods

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Exceptionally well-preserved shells of the endocerids *Dideroceras wahlenbergi* (Foord, 1887), *Anthoceras vaginatum* (Schlotheim, 1820), and *Suecoceras barrandei* (Dewitz, 1880) from phosphatized Early and Middle Ordovician limestones of Northern Estonia were studied by means of SEM. The septal neck in these endocerids is composed of three, structurally different, aragonite layers: outer spherulitic-prismatic, nacreous, and inner prismatic. The connecting ring is a continuation of the spherulitic-prismatic layer of the septal neck. Its inner surface was probably covered by a thin glycoprotein (conchiolin) sheet. Structural differentiations in the spherulitic-prismatic layer of the connecting ring, such as a layering and `eyelet', reported by previous writers, were not observed. These differentiations probably result from diagenesis. The siphuncular structure in endocerids agrees in detail with that in Recent *Spirula* and *Nautilus*. The conical endosiphuncular deposits (endocones) of endocerids show extensive intraspecific variation. Morphological and structural differences in these deposits should therefore be used with caution in generic and specific diagnoses.

Key words: endocerids, structure, Ordovician, siphuncle, *Nautilus*, *Spirula*.

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