SOME ASPECTS OF THE HISTOLOGICAL ORGANIZATION OF THE MURAL STRUCTURAL COMPONENTS IN THE BRACHIAL AND MEDIAN ARTERIES OF THE GIRAFFE (Giraffa camelopardalis)

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SUMMARY

The organization of the mural structural components in the branchial and median arteries of adult giraffes (Giraffa camelopardalis) as adapted to high hydrostatic pressure has been studied by light microscopy. It has been found that apart from a local dilatation situated at the radio-carpal joint, the median artery shows a marked wall thickening and luminal narrowing. It has also been observed that although smooth muscle predominates in the tunica media, there are definite fibroelastic septa intervening between muscle bundles especially on the adventitial side of the tunica media. It is proposed here that the parallel arrangement of the three mural elements, namely, smooth muscle, collagen and elastin in the tunica media, together with the thickened and largely elastic tunica adventitia constitute part of the mechanisms that underlie the protection of the arterial wall and distal capillary beds against rapture and development of filtration oedema.