

AUTHOR	RATNATUNGA, NVI
ORIGINAL TITLE	A Histological immunohistochemical and experimental study of obliterative arterial diseases of limbs. with special references to thromboangiitis obliterans.
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MAIN HEADING	ARTERIAL OCCLUSIVE DISEASES
ABSTRACT	<p>Occlusive arterial disease of limbs, in the young patient is a common surgical problem in Kandy, Sri Lanka. The progressive ischaemia to the tissues of the limbs, often necessitates amputation, with resultant disability to the patient. A similar disease seen in other countries, is now designated as thromboangiitis obliterans or Buerger's disease after the original description of the disease, by the latter author in 1908. However the pathology seen in the patients from Kandy, Sri Lanka, with the clinical features referred to above has not been elucidated . The etiology of this obliterative vascular disease remains obscure. The present investigation was aimed at, 1. establishing the pathology seen in the blood vessels, of young patients with occlusive arterial disease, clinically resembling Buerger's disease 2. determining the etiology and pathogenesis of the pathological lesions observed. 3. designing an experimental model, to study the effects of tobacco on the vascular system by using the vessels of Tilapia mossambica fish, for this purpose. Amputated lower limbs and digits, and endarterectomy specimens were examined in this study. Histological, histochemical and immunohistochemical techniques were used for staining the tissue sections, made from this material. An experimental model was developed for investigation of effects of tobacco extracts, on the vascular system of the Tilapia mossarrbica fish. The results of this investigation show' that 1. a disease entity causing ischaemia to the lower limbs of young adult smokers, similar to that described by Buerger, (1908), exists in Sri Lanka. 2. in this condition focal disease of the intima is a possibility 3. deposition of either immune complexes containing IgG or antibodies to the vessel wall consisting of IgG, are present in the vasa vasorum of the arteries, and small blood vessels of the neurovascular bundle. 4. a vasculitis affecting small blood vessels of the thrombus, vasa vasorum of the artery, and small blood vessels of the nerve bundle, and connective tissues, had developed and that this appeared to be mediated by B lymphocytes and was possibly of immunological origin. The results of the experimental studies, indicate, that constituents of tobacco, possibly has the ability to sensitize mononuclear cells, in the Tilapia mossarrbica fish, and cause occlusion of small blood vessels in these animals. Future investigations should include serum studies of patients suffering from thromboangiitis obliterans, in order to detect antibodies to the arterial wall, and circulating immune</p>

complexes. The presence of complement in the arterial wall should also be looked for. The HLA pattern of affected individuals must be established. The patients should also be investigated for hypercoagulable states, of the blood. Investigations should also be carried out, in order to detect sensitization of lymphocytes, to tobacco and vascular antigens. Experimental studies to detect the effect of tobacco on the vascular system of mammals is a vista for future investigations.