

Lendrum A C, Fraser D S, Slidders W & Henderson R. Studies on the character and staining of fibrin. *J. Clin. Pathol.* 15:401-13, 1962.
[University of St. Andrews Department of Pathology, Royal Infirmary, Dundee, Scotland]

The technical aim was methods sensitive for fibrin with coincident portrayal of local tissues; the pathological aim was to elucidate different fibrinous vasculoses. Fibrinous vasculosis is deposition of fibrin within, and possibly beyond, the wall of blood vessels without visible fibrin in the lumen. This interstitial fibrin undergoes change with time, showing affinity for larger molecule dyes. The last stage is a pseudo-collagen. [The SCI[®] indicates that this paper has been cited in over 290 publications since 1962.]

A.C. Lendrum
Department of Pathology
Royal Infirmary
Dundee DD1 9ND
Scotland

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"An almost explosive interest in the structural character of renal disease followed the conjunction in medical practice of needle-biopsy and EM techniques. The time was therefore ripe for a simple trichromic staining method able to show, at the variable magnifications of the light microscope, not only the presence but also the actual situation of fibrinous deposits. Our attempt to explain the underlying principle of trichromic methods and to illustrate the results in colour may well have enticed histopathologists, other than nephrologists, to adopt the methods and to apply them in the study of the group of diseases characterized by zonal hyperpermeability of blood vessels. These diseases cover a wide range: from urticaria to polyarteritis nodosa; from the kidney of diabetes mellitus to that of malignant hypertension; from the fibrin-soaked vessel walls of a torsed tissue to the hyaline broadening of the intima in senile arteries.

"Subsequent studies on the methods and their applications particularly to the diabetic kidney showed that the fibrinous deposits within the vessel walls and beyond (what we called 'fibrinous vasculoses'), eliciting no xenophobic reaction, undergo intrinsic alteration with time. As it ages, the fibrin loses its affinity for the small anionic dyes and takes the larger anionic dyes that characteristically in trichromic methods stain collagen. Thus, the old fibrin becomes a pseudo-collagen and we have to question the canonical views on hyalin.^{1,2} The fact that the sites and shapes of amyloid deposits in the kidney so remarkably resemble the fibrinous deposits in the diabetic kidney² is surely of significance to those interested in amyloidosis. Finally, considering the growing interest in dysoria,³ definable as an upset of the normal balance between the selective permeability of the vessel's wall and the pressure within the vessel, and the fact that fibrinous vasculosis is the visible result of the less sudden and less destructive degrees of dysoria, it is perhaps not surprising that there is increasing interest in staining methods for fibrin.

"Another possible explanation of the interest in our article could be enticement by the excellent colour reproduction of the photomicrographs, and I now submit that the printers did even better in two related subsequent publications.^{1,2} To this I would add the wise caution³ of the same H. Edward MacMahon who was at the birth of dysoria,⁴ 'Most of us are inclined to regard an investigator's first paper as his final opinion on a particular subject.' As far as I am concerned the paper of 1962 is neither the first nor the last on this particular matter.

"It has been my good fortune in Glasgow and then Dundee to have as fellow workers senior technicians who have collaborated wholeheartedly and played their part in contributing their skill and their ideas. It was, therefore, a great thrill and surprise to receive, as had my onetime encouraging teacher and later colleague, the late D.F. Cappel, the rare honour of the Sims Woodhead Medal for Services to Medical Laboratory Technology, presented by the Institute of Medical Laboratory Sciences."

1. Lendrum A C. The validation of fibrin and its significance in the story of hyalin. (Association of Clinical Pathologists) *Trends in clinical pathology: essays in honour of Gordon Signy*. London: British Medical Association, 1969. p. 160-87.
2. Lendrum A C, Slidders W & Fraser D S. Renal hyalin, a study of amyloidosis and diabetic fibrinous vasculosis with new staining methods. *J. Clin. Pathol.* 25:373-96, 1972.
3. MacMahon H E. Malignant nephrosclerosis. (Sommers S C, ed.) *Pathology annual*. New York: Meredith, 1958. p. 297-334.
4. Schürmann P & MacMahon H E. Die maligne Nephrosklerose zugleich ein Beitrag zur Frage der Bedeutung der Blutgewebsschranke. *Virchows Arch. Path. Anat.* 291:47-218, 1933.