Correspondence

Virchow and Apoptosis

To the Editor-in-Chief:

Apoptosis is a type of cell death that has specific morphological, biochemical, and regulatory characteristics, somehow different from necrosis.¹ It was described in our time by the Australian pathologist John Kerr^{2,3} and given its present name by Kerr et al in 1972.⁴ It is interesting that this type of cell death was also described by Glucksman in 1951 as present in normal embryological development.⁵

We found recently that the famous German pathologist and biologist Rudolf Virchow (1821–1902) described apoptosis in a lecture given in 1858.⁶ In it, he described two types of cell death, necrobiosis *versus* necrosis. The former is “always here to deal with a gradual decay and death, a dissolution. . . . Necrobiosis is death brought on by (altered) life, a spontaneous wearing out of living parts, the destruction and annihilation consequent on life, natural as opposed to violent death (mortification). . . . But the idea of necrosis really does not offer any analogy to these processes. . . .”

In summary, we should add to Virchow’s accomplishments the early suggestion of apoptosis, which he called

necrobiosis and which, he made very clear, was different from necrosis.

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