

This Week's Citation Classic

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Kleeman C R, Hewitt W L & Guze L B. Pyelonephritis. *Medicine* 39:3-116, 1960. [Wadsworth Hosp., Veterans Admin. Ctr., and Dept. Medicine, Univ. California Medical Sch., Los Angeles, CA]

Pyelonephritis may be defined as the pathologic alterations which occur subsequent to the multiplication of pathogenic bacteria in the renal parenchyma and pelvocalyceal system. Quantitative investigations of the normal and pathogenic bacteriology of the genito-urinary tract have brought to the attention of the medical world the prevalence and insidious character of significant infection of the urinary tract. [The **SCI**[®] indicates that this paper has been cited over 255 times since 1961.]

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"We are very pleased to know that our article written in 1960 has been cited frequently. We wrote this article with the intention of reviewing most of the pertinent literature published up to that time. Interest and research activity in the field of urinary tract infections were becoming markedly accelerated due to the establishment of the validity of quantitative urinary culture as an epidemiological tool. In 1939, Soma Weiss and Frederic Parker, Jr., of the Harvard Medical School, had published their classic contribution, 'Pyelo-nephritis: its relationship to vascular lesions and to arterial

hypertension.'¹ That review presented now widely used histologic criteria for the diagnosis of pyelonephritis, as well as pointed out the clinical variability of this disease and its possible association with hypertension. With the advent of diagnostic quantitative urinary cultures, it was possible to study large segments of the population to determine the occurrence and natural history of this disease. All of us had been interested in urinary tract infections and had conducted research in this area. Kleeman, who is a clinician primarily interested in renal physiology, had studied many of the functional aberrations associated with renal infection. Hewitt was interested in treatment experiences as well as selected clinical aspects of the disease. My laboratory had been conducting experiments dealing with the pathogenesis of pyelonephritis, with particular emphasis on the host-parasite relationship. It was, therefore, natural for the three of us to review this disease, including the literature as well as our own personal clinical and laboratory experiences.

"The resulting publication made available to other investigators and interested scientists a fairly complete update of the information that they might need to build on past observations, thus accounting for its frequent citation. We are pleased that our intentions have been realized and that the manuscript served as a valuable resource upon which other useful studies were conducted."²⁻⁴

1. **Weiss S & Parker F, Jr.** Pyelonephritis: its relationship to vascular lesions and to arterial hypertension. *Medicine* 18:221-315, 1939.
2. **Bhathena D B, Weiss J H, Holland N H, McMorrow R G, Curtis J J, Lucas B A & Luke R G.** Focal and segmental glomerular sclerosis in reflux nephropathy. *Amer. J. Med.* 68:886-92, 1980.
3. **Olsson P J, Black J R, Gaffney E, Alexander R W, Mars D R & Fuller T J.** Reversible acute renal failure secondary to acute pyelonephritis. *Southern Med. J.* 73:374-6, 1980.
4. **Vivaldi E, Gonzalez E, Conejeros M, Bergerel I & Zemelamn R.** Bacteriuria, urinary infection and pyelonephritis. *4. Rev. Med. Chile* 107:1128-34, 1979.