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ACTIVE LUPUS GLOMERULITIS AND HEMATOXYLIN BODIES WITH NORMAL URINALYSIS

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Since originally described by Gross the hematoxylin body has been regarded as the single most characteristic histologic sign of lupus erythematosus (LE).[1-6] It is a round or oval, reddish-purple or blue-staining structure (hematoxylin and eosin stain) about the size of a cell nucleus and identical to the nuclear inclusions of LE cells. It is found in 13 to 35 per cent of patients with lupus nephritis.[2, 3, 7, 8] In the absence of this finding the renal histology of patients with systemic LE may be difficult to distinguish from other forms of glomerulonephritis. It is seen with histologic evidence of severe, active nephritis[9] and thus far only in patients with an abnormal urinalysis.[2, 4, 7, 8] However, we have observed a patient who has had consistently normal urinalyses despite the presence of active lupus glomerulitis and hematoxylin bodies.

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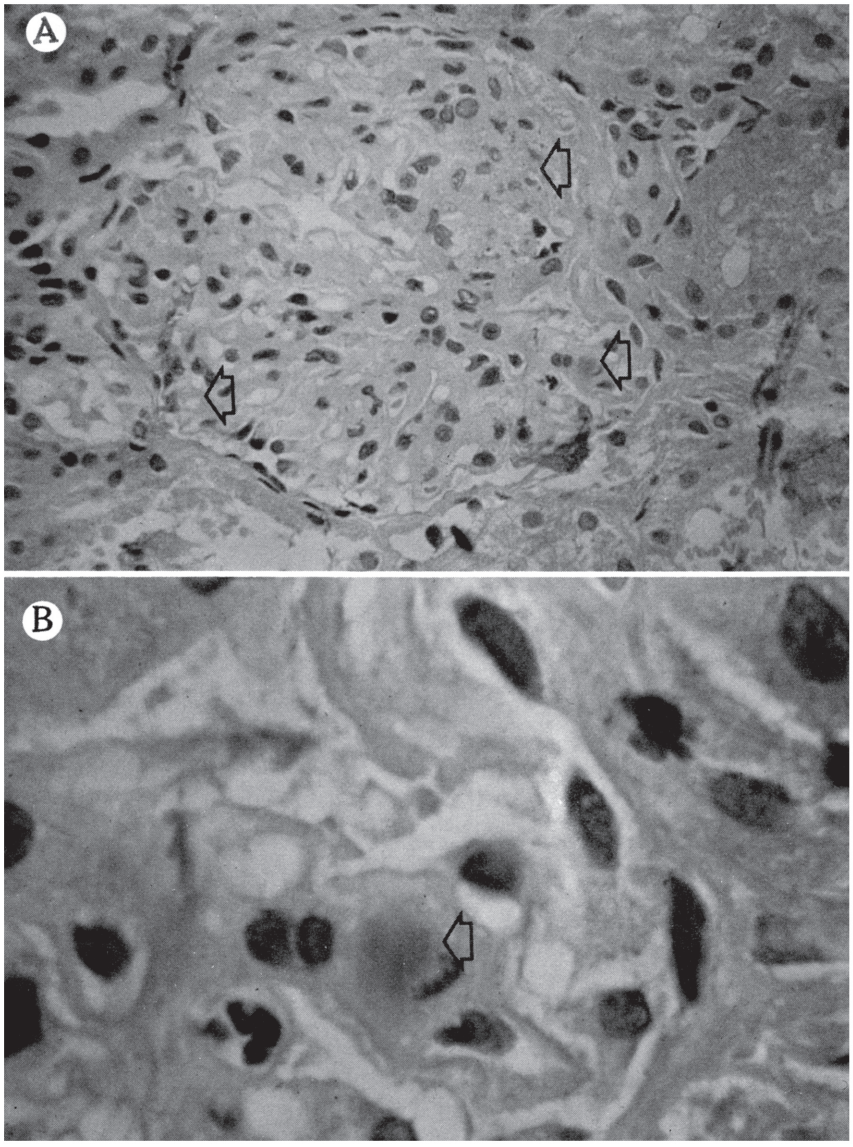
CASE REPORT

A 15-year-old girl was in good health until December 1967, when chorea developed following an episode of pharyngitis. There were no cardiac findings but she was begun on benzathine penicillin G (bicillin) prophylaxis monthly. In June 1968 a facial erythematous rash and fever developed. LE cell preparations and antinuclear factor were positive numerous times. A month later joint pains developed in her legs. The urinalysis revealed no sugar or protein and no white, red or tubular cells in the sediment. The serum creatinine was 0.8 mg. per 100 ml. Prednisone, 40 mg. daily, was begun and tapered to 10 mg. daily during the next 3 months. Initial symptomatic relief continued.

She was well except for fatigue until December 1969, when she again noticed arthralgia and intermittent swelling of the ankles, knees and hands, and low grade fever. In March 1970 a butterfly rash again occurred. The prednisone was increased to 60 mg. daily, after which the temperature decreased and the joint symptoms improved. She had no hematuria or edema. Monthly urinalyses consistently revealed no sugar or protein and no cells in the sediment.

She was admitted to this center on April 5, 1970. The only abnormalities on physical examination were palmar and plantar erythema, maculopapular erythematous facial rash and slight obesity. The hematocrit was 37.5 per cent and white blood count 5,400 with a normal differential. The 2-hour post-prandial blood sugar was 100 mg., blood urea nitrogen 16 mg. and serum creatinine 0.9 mg. per 100 ml. Creatinine clearance was 185 L per 24 hours. Tests on serum were negative for rheumatoid factor but positive for antinuclear antibodies on 3 occasions. Chest x-rays and excretory urogram were normal. Serum complement was 40 units. Urinalyses again revealed completely negative sediment and no protein on 5 occasions. Less than 300 mg. protein were excreted in the urine per 24 hours.

She became asymptomatic with a normal



A, glomerulus shows local basement membrane thickening (left arrow), nuclear fragmentation (right upper arrow) and hematoxylin body (lower right arrow). H & E, reduced from ×263. *B*, magnification of hematoxylin body seen in part *A*. H & E, reduced from ×1,190.

physical examination while taking 45 mg. prednisone and 3,900 mg. aspirin daily. On April 15 a percutaneous biopsy of the right kidney was performed. She had had a total of 35 urinalyses and none revealed any abnormality.

More than 12 glomeruli were represented in serial sections of the biopsy specimen. One glomerulus was totally hyalinized. Other glomeruli exhibited apparent local thickening of basement membranes, local karyorrhexis and hypercellularity. Hematoxylin bodies were present in some glomeruli. No significant abnormality was noted in the tubules and there was no evidence of interstitial inflammation or vasculitis (see figure).

DISCUSSION

It is well known that normal urinalyses may be found in patients with lupus erythematosus in spite of histologic evidence of glomerulitis. This combination has been reported in 3 of 22 patients bv Muehrcke,[7] 2 of 18 patients by Soffer,[4]

3 of 17 patients by Griffith[10] and 5 of 25 patients by Zweiman.[11] However, in each of these patients the histological abnormalities were mild and hematoxylin bodies were not found. The patient described herein illustrates that the urinalysis may be persistently normal not only with histologically active lupus nephritis but even in the presence of specific hematoxylin bodies.

SUMMARY

A patient is described who had specific active upus nephritis (proved by biopsy) despite the absence of microscopic hematuria or pyuria. Repeat examinations of the urine had been done for 2½ years. No other clinical evidence of renal involvement had been noted.

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