Haemorrhagic Shock Nine Days after Extracorporeal Shock Wave Lithotripsy in a Patient with Haemophilia B

Dear Sir,

Extracorporeal shock wave lithotripsy (ESWL) has become the optimum treatment for most cases of renal and ureteric calculi (1). ESWL offers both high treatment success and low complication rates. Besides rare complications such as "stone street" formation, infections and cardiac arrhythmias only three out of 1,000 patients treated at the London Stone Clinic by October 1986 suffered from major haemorrhagic complications (1, 2).

Das et al. (1) state that patients with an abnormal clotting profile were unsuitable for ESWL although it was possible to treat some of them after correction of their clotting disorder. Recently ESWL was performed without complications in patients with severe haemophilia A (3) or haemophilia B (4) after factor VIII or IX replacement therapy on the day of lithotripsy.

We report the case of a 49-year-old patient with severe haemophilia B and bilateral nephrolithiasis who was admitted to the Department of Urology for ESWL of 3 renal stones with diameters of up to 3 cm in the right kidney. 4,000 U of virus inactivated factor IX (Faktor IX-Komplex Swiss Red Cross) were infused preoperatively resulting in an increase of factor IX clotting activity from <0.01 U/ml to 0.49 U/ml. Under general anaesthesia, 2,500 shock waves (Dornier HM-3 lithotripter) were applied and an ureteral double-J-stent was inserted to prevent obstruction. Mild haematuria was noted initially and after 48 hours when factor IX activity had declined to 0.08 U/ml. Another 1,500 U of factor IX were infused and the patient was discharged. No perirenal haematoma could be detected by repeated ultrasonography during the hospital stay. Nine days after ESWL the patient was readmitted because of violent pain in the right loin without haematuria. Haemorrhagic shock developed within 6 hours of admission (haemoglobin fell to 7.5 g/dl). A large perirenal haematoma was evident on a CT scan. After replacement of 4,000 U of factor IX the patient was operated and a haematoma of 2 liters was evacuated. Diffuse bleeding was noted from the inferior pole of the right kidney. After regular factor IX infusions during 12 days, the patient was finally discharged in good condition.

In contrast to the scarcity of clinically manifest bleeding reported by Das et al. (1), Grote et al. (5) found ESWL induced haematomas in 37 out of 42 patients without clotting disorders. Perirenal and/or subcapsular haematomas were diagnosed by CT scan even though some were too small to be detected by ultrasonography.

Our case confirms the bleeding risk in haemophilic patients subjected to ESWL (6). We conclude that ESWL constitutes a strong haemostatic challenge and should not be performed in patients with clotting abnormalities unless prolonged replacement therapy, as employed for surgical intervention, corrects the bleeding disorder.

M. Lauper*
B. Lämmle*
M. Furlan*
Ch. Zehntner**
E. Zingg**
Central Haematology Laboratory* and Department of Urology**
University of Bern
Inselspital
CH-3010 Bern, Switzerland

Correspondence to: B. Lämmle, M. D., Central Haematology Laboratory, Inselspital, CH-3010 Bern, Switzerland

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