

# Spontaneous Bilateral Perirenal Hematoma in a Patient with Tetralogy of Fallot

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## Key Words

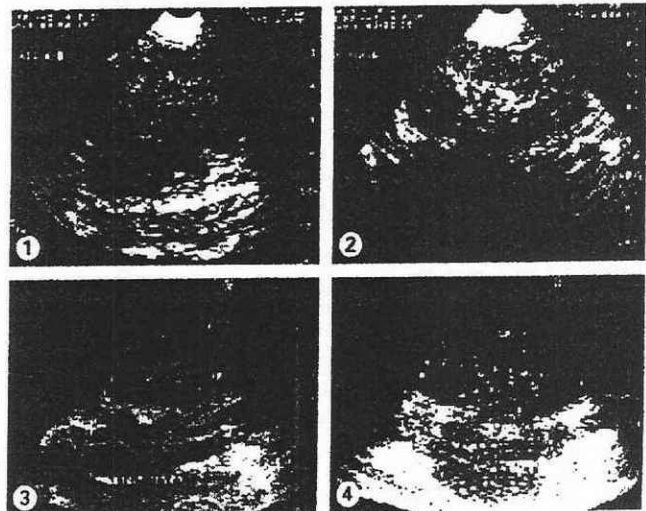
Spontaneous perirenal hematoma · Tetralogy of Fallot

## Abstract

We report a patient with tetralogy of Fallot who developed spontaneous bilateral perirenal hematoma at the age of 35. Polycythemia was seen from the age of 3 in this patient. Prolonged clotting time and partial thromboplastin time were observed on various occasions before he developed perirenal hematoma. Blood letting was done periodically according to the value of hemoglobin level and packed cell volume. Resolution of hematoma was seen sonographically.

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A 35-year-old normotensive, nondiabetic male came with complaints of loin pain on both sides. He is a known case of tetralogy of Fallot detected by the age of 3 years



**Fig. 1.** Ultrasound showing echo-free space surrounding the right kidney suggestive of perirenal hematoma.

**Fig. 2.** Ultrasound showing echo-free space surrounding the left kidney suggestive of perirenal hematoma.

**Fig. 3.** Ultrasound showing diminution of echo-free space surround-

age of 35. hemoglobin was 24 g/dl, packed cell volume was 75 ml/dl, urea was 54 mg/dl and potassium was 5.20 mmol/l. Partial thromboplastin time and the clotting time were elevated with bleeding time being normal. Ultrasonogram (USG) revealed bilateral perirenal fluid collection suggestive of hematoma (fig. 1, 2). He underwent frequent blood letting thereafter, 500 ml per sitting (79 times till now) on the average of 9 per year, to maintain his hemoglobin at around 15 g/dl and packed cell volume at around 50 ml/dl. USG done on various points revealed diminishing perirenal hematoma (fig. 3, 4). X-ray KUB was normal. Renal parameters were normal.

Reiter et al. [1] reported benign and malignant tumors accounting for 71% of cases of spontaneous perirenal hematoma followed by vascular disease for 23% cases and 4% by infectious diseases. Increases in hemoglobin percentage, packed cell volume and prolonged coagulation time have been observed from the age of 3 in this case. Polycythemia secondary to cyanotic congenital heart disease is a cause for blood coagulation defects [2, 3]. Platelets in blood from patients with polycythemia have been found to form markedly smaller platelet aggregates. This bleeding defect is quantitatively related to polycythemia,

and may be a mechanical effect of the excess erythrocytes [2]. The estimated platelet half-life in patients with cyanotic congenital heart disease is significantly shortened [3]. Coagulation defect is the probable cause of spontaneous bilateral perirenal hematoma in this case. After repeated blood letting his clotting time became normal. Also his perirenal hematoma resolved as shown by the ultrasonogram. To our best knowledge and extensive search of the literature no such case has been reported.

## References

- 1 Reiter WJ, Hattel A, Heinzpeter, Pecha V, Maderberger M: Spontaneous nontraumatic rupture of a contracted kidney with subcapsular and perinephric hematoma in a patient receiving chronic hemodialysis. *Urology* 1997;50:777-783.
- 2 Ware JA, Reaves WH, Horak JK, Solis P: Defective platelet aggregation in patients undergoing surgical repair of cyanotic congenital heart disease. *Ann Thorac Surg* 1983;36:283-294.
- 3 Lopes AA, Maeda NY, Ebaid M, Chamone DF, Pileggi F: Effect of intentional hemodilution on platelet survival in secondary pulmonary hypertension. *Chest* 1989;95:1207-1211.