

high, jugular venous pressure was elevated. Heart sounds were clearly audible and there was no pericardial rub. While they were on PD, they suddenly became breathless and hypotensive. An echocardiogram was done for two of them which revealed massive pericardial effusion with features of pericardial tamponade. Their blood pressure returned to its original baseline following pericardiocentesis. Unfortunately, the improvement in blood pressure was not sustained. They became hypotensive again and this time they did not respond to resuscitation. Uremic pericarditis with pericardial tamponade was presumed to be the cause of their death as the pericardial effusion aspirated was blood-stained and they were still clinically uremic with the blood urea prior to their death being high. The relatives of other two patients refused any further intervention and eventually they died.

## Discussion

Peritoneal dialysis is performed frequently in Al-Kindi Teaching Hospital. This frequency gives a fair chance for doctors and nurses to be skillful in the technique and nursing care of the dialysis procedure.

Peritoneal dialysis is a simple procedure that can be started easily and without delay. The PD treatment modality is invaluable in patients with ARF, in whom short-term dialysis support can be life-saving and can affect a complete cure. Similarly, in patients with CRF, in whom various aggravating factors have caused acute exacerbation of their illness, short-term dialysis support can help both to reverse the acute component and to treat the precipitating factors. With restoration of renal function to baseline level, patients may remain independent of dialysis for several months or years.

The mortality rate in patients on PD has been reported to vary between 5% - 12 %<sup>(5)</sup>. Mortality in our study was 15% which is nearly comparable to a study in Koirala Institute of Health Sciences in Eastern Nepal at 2003 (death rate was 12.5%). Sixty seven out of one hundred sixty eight (40%) patients with acute renal failure died compared to thirty three out of five hundred one patients

(6.5%) with chronic renal failure (statistically significant). It has been shown in most series that patients with acute renal failure have higher mortality rates because of concomitant medical problems. This was well illustrated in our study where deaths were attributed to the severe underlying disease rather than to uremia. Only four deaths could be directly attributed to uremia. Those patients had pericardial tamponade due to uraemic pericarditis soon after initiation of PD.

Vaamonde and Valk<sup>(5)</sup> reported 30-32% of dialysis was complicated by bleeding most of which were minor. In our study 30% of patients had bleeding (majority was mild) which is nearly comparable with bleeding rate (20%) in a study that done in Hospital University Science Malaysia Zainaland Loo 1992. Uremic patients invariably have abnormalities of platelet function characterized by a prolonged bleeding time, abnormal platelet aggregation, abnormal platelet adhesion test and decreased release of platelet factor 3<sup>(6,7)</sup>. The platelet count is generally normal and alteration in the concentration of circulating clotting factors, when present, is not consistent and does not contribute to a bleeding tendency. The result that correlates best with the occurrence of clinical bleeding is the abnormality of bleeding time<sup>(6)</sup>. Even though detailed platelet function tests have not been carried out, the presence of prolonged bleeding time, normal platelet counts and the appropriate clinical setting have allowed us to conclude that bleeding in our patients was due to uremia. We continued with PD despite bleeding from the peritoneal cavity. The bleeding ceased while the patients were on PD and this further supported our initial impression that the bleeding was uremic in nature. Other therapeutic modalities that have been shown to correct bleeding time of uremia are infusion of cryoprecipitate<sup>(8)</sup> and injection of l-deamino-8D-arginine vasopressin<sup>(9)</sup> and oral or parenteral administration of a conjugated estrogen preparation<sup>(10)</sup>. The above measures were not used in our patients (not available) apart from