

The use of temporary or semi-permanent hemodialysis catheters remains an essential component of dialysis practice, both for the management of acute renal failure and as temporary bridging access for patients whose other dialysis access is unavailable for use. Unfortunately the use of these catheters is often complicated by mechanical or infectious complications which may result in patient's morbidity or premature catheter removal. Catheter related bactremia is the most significant infectious complication of hemodialysis catheter⁽⁵⁾.

One of the most frequent complications during hemodialysis is dialysis hypotension. It occurs in an estimated 20 % of all hemodialysis sessions. The symptoms vary from fatigue, yawning, cramps, nausea and vomiting to angina pectoris or loss of consciousness. The symptoms are generally transitory. however, dialysis hypotension can also cause permanent damage, such as a myocardial infarction, a cerebrovascular accident, intestinal infarction or an occlusion of the arterio-venous fistula⁽⁶⁾.

With the advent of developments and advances in hemodialysis machine technology, dialysate water purification, and dialyzers, the clinical spectrum of intradialytic complications has changed over the decades. In the pioneering days of hemodialysis, patients were to liable develop allergic reactions to dialyzer membranes,sterilizing and reprocessing agents, coupled with machines that could not accurately control ultrafiltration rates, and chemically and bacterially contaminated dialysate⁽⁷⁾.

Patients and method

A study was conducted of dialysis unit in AL-Kadhmiya Teaching Hospital from the period of February 2007 to October 2008. Complications

during hemodialysis were studied in 700 hemodialysis session. The number of patients involved in this study 100 patients (56 male and 44 female) of different age group ranging from(5 to 70) years mean of age 37.3 year.

52 patients have permanent arteriovenous fistula and 48 patients have temporary catheter. Location of the catheter was subclavain vein in 28, internal jugular vein 12 and femoral vein 8. Patients were followed up for three month. Each patient subjected to hemodialysis for period of 3—4 hours in two or three sessions per week.

Using GAMBRO AK95S hemodialysis apparatus with polyfluxTML dialyzer membrane with effective surface area rang from 1.4 to 2.1m² and flow rate rang from 200 to 300 ml/min

The composition of dialysate was as follows:

sodium	133 mmol/L
chloride	97 mmol/L
calcium	1.5 mmol/L
potassium	1.5 mmol/L
magnesium	0.8 mmol/L
acetate	40 mmol/L
glucose	2.1g/L

Special formula was prepared for each patient including: name, age, sex, and cause of renal failure, onset of renal failure, and signs and symptoms of complications during the hemodialysis process.

The following complications were given careful consideration in this study: catheter complication, hypotension, infection such as hepatitis, muscle cramps, nausea, vomiting, fainting, headache, chest pain, backache, itching, fever, chills, seizures, and disequilibrium syndrome.

Diagnosis of these patients acute or chronic renal failure depend on history taking from the patients and relative, clinical examination also on