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التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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OCULAR MANIFESTATIONS OF CHRONIC RENAL FAILURE

Thesis

Submitted in Partial Fulfillment of the Requirments for the Master Degree in

"Ophthalmology"

By

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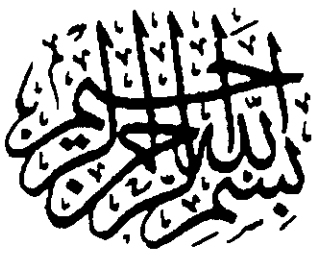

﴿ ... نَرْفَعُ دَرَجَاتٍ مَّن نَّشَاءُ وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ ﴾

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INTRODUCTION

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Definition:

Chronic renal failure (CRF) is a chronic deterioration of renal function, resulting in a build up of a nitrogenous wastes in the plasma and failure of the kidney to regulate extracellular fluid volume or composition [1].

Chronic renal failure can be considered as a multisystem disease process due to persistant inability of the kidney to perform one or more of its vital functions. It is generally irreversible and progressive in nature [2].

The first symptoms of CRF usually occur late in the course of the disease and are also vague and non-specific. All symptoms and findings being referred to uremia that includes all the manifestations of renal failure. Although the prominence of specific symptoms may vary from one patient to another, no organ system is spared[3].

The course of CRF can be divided into three phases:[4]

Phase I: exists when the endogenous creatinine clearance corrected for age,sex and surface area has fallen from normal to any value more than 20% of normal for age and sex. Patients in phase I are rarely symptomatic in any major way. They should be set up on an organised plane for treating reversible factors

such as hypertension, specific renal diseases such as lupus nephritis , salt & water balance and lipid disturbances[4].

Phase II: exists when the glomerular filtration rate is between 20% and 5% of normal. Most patients in this stage will be moderately to severly symptomatic. These patients can often be managed by conservative methods[4].

Phase III: is the so called "end stage" of progressive renal disease (ESRD) and begins when renal function approaches 5% of normal [4]. End stage renal disease is a clinico-biochemical term denoting gradual progressive reduction in renal function causing retention of waste products and disturbances of the internal environment[5].

COMMON CAUSES OF CHRONIC RENAL FAILURE

1) Glomerulonephritis:

It is the most common single cause of end stage renal failure ESRF and accounts for approximately 35% of cases. The high incidence of glomerulonephritis as a cause of end stage renal failure ESRF is a reflection of lack of effective treatment for chronic glomerulonephritis[6].

2) Infections:

As a cause of ESRF is mainly due to obstruction or vesicoureteric reflux. Tuberculosis still occur but only occasionally, and acute pyelonephritis. The importance of infection lies in the detection of obstruction or reflux and their appropriate management[6].

3) Obstruction:

Prostatism and stones account for most cases of ESRF due to obstruction, which clearly are preventable if diagnosed in time[6].

4) Renovascular causes:

Atheroma of the renal arteries causing renal ischaemia and CRF. Typically, patients are over 60 years old, having a history of cardiac, cerebral or peripheral vascular disease, smoking, hypertension, and may have diabetes[6].

5) Nephrotoxic drugs and chemicals:

Analgesic nephropathy must be considered in patients with chronic painful conditions. If patients analgesic consumption can be reduced, improvement in renal function may follow[7]. Non-steroidal antiinflammatory drugs (NSAID) have been reported to cause ESRF, as will as acute or chronic renal failure. NSAID like other drugs can cause interstitial nephritis. They can also cause ischaemia by their action on prostaglandin synthetase inhibitors. NSAID, and chronic diuretic therapy with furesemide, are the common causes of interstitial nephritis[6].

6) Hypertension:

There has been a reduction in the incidence of hypertension as a cause of ESRF because of greater compliance and wider range of effective antihypertensive drugs[6].

7) Inherited disease:

Polycystic kidney and Alport's disease are the two most common inherited conditions causing end stage renal failure ESRF[6]. Alport's syndrome is also called heriditary nephritis and may be associated with ocular abnormalities [8].

8) Idiopathic causes:

The patient's history e.g. primary hypertension, previous or familial nephritis or drug intake may indicate a presumption

diagnosis but many patients are devoid of any clue to the diagnosis [6].

9) Diabetes mellitus:

Diabetes mellitus is the most common cause of CRF. Patients with type I diabetes mellitus typically presented with proteinuria, after 10-15 years of diabetes which is followed in 2-3 years by progressive renal failure. About 50% of patients affected with type I diabetes develop kidney diseases [9].

Diabetic glomerulopathy is a complex disorder associated with a diffuse expansion of collagenous components of the glomerulous. The diabetic patient is also prone to other renal diseases such as pyelonephritis, papillary necrosis, and obstructive nephropathy that occasionally cause or exacerbate renal failure. Diabetic patients with glomerulopathy are more susceptible to these associated renal disorders ESRF than those who do not have glomerulopathy [8].

The Common causes of CRF are summarised in table (1):