INTRODUCTION

Scoliosis is a fixed,structural,lateral curvature of the spine with assotiated rotatation of the vertebrae Most cases are idiopathic and occur with a male :female ratio of 1:4. Surgery is usually considered when the Cobb angle exceeds 50 percent in the thorathic , or 40 percent in the lumbar spine **(Pehrsson et al, 1992)**.

Scoliosis can be congenital or aquired. Congenital scoliosis,which maybe present at any age,is a result of failure of vertebral segmentation called (a bar) or failure of formation called (hemivertebrae). Congenital scoliosis is often part of generlized condition, such as Goldnhar syndrome or spina bifida,and maybe assotiated with abnormalities in the renal,cardiac ,respiratory,or neurological systems **(Wazeka et al, 2004)**.

The indication of surgery is documented in progression at any age. Most aquired scoliosis is idiopathic, infantile onset idiopathic scoliosis (scoliosis before the age of 8 years) carries the most serious prognosis and if left unchecked is likely to result in cardiopulmonary failure in middle age **(Deutsch et al,2001).**

The intervening surgery for scoliosis aims to halt the progression of the condition and at least partially correct the deformity preventing further respiratory and cardiovascular deterioration which may rapidly progresses and is often fatal by the fourth or fifth decade of life as a result of pulmonary hypertension,right ventricular failure or respiratory failure **(Pehrsson et al, 1992)**.

During corrective surgeries of scoliosis, distractive forces may be applied to the spines with instrumentation placed over multiple spinal levels, insertion of such devices may be through anterior or posterior or combined approach involving repositioning of the patient partway through the procedure and major blood loss **(Raw et al, 2003)**.

So the challange to the anaesthetist is to provide optimal surgical conditions whilst ensuring adequate oxygenation to the brain and spinal cord and facilitating the use of intraoperative spinal cord monitoring techniques if appropriate.The maintenance of spinal cord perfusion pressure(to prevent ischemia) and avoidance of cord compression are cruchial consideration in those operations **(Raw et al, 2003)**.

THIS is what we call spinal cord protection which can be achieved through the followings:-

1- Identification and reimplantation of critical segmental arteries.

2- Adequate spinal cord monitoring.

3- Controlled hypotensive anaesthesia to reduce blood loss pharmacologically by the mean of drugs or by the mean of regional anaesthesia .

4- Hypothemia which may be systemic hypothemia, hypothermic perfusion, regional cooling.

5- Pharmacologic neuroprotection .

6- Selective spinal cord perfusion

7- Retrograde venous spinal cord perfusion.

8-Preconditioning of the spinal cord

9-Cerebrospinal fluid pressure monitoring and drainage