RECOVERY FROM PROPOFOL IN CIRRHOTIC PATIENTS UNDERGOING CHOLECYSTECTOMY

Thesis
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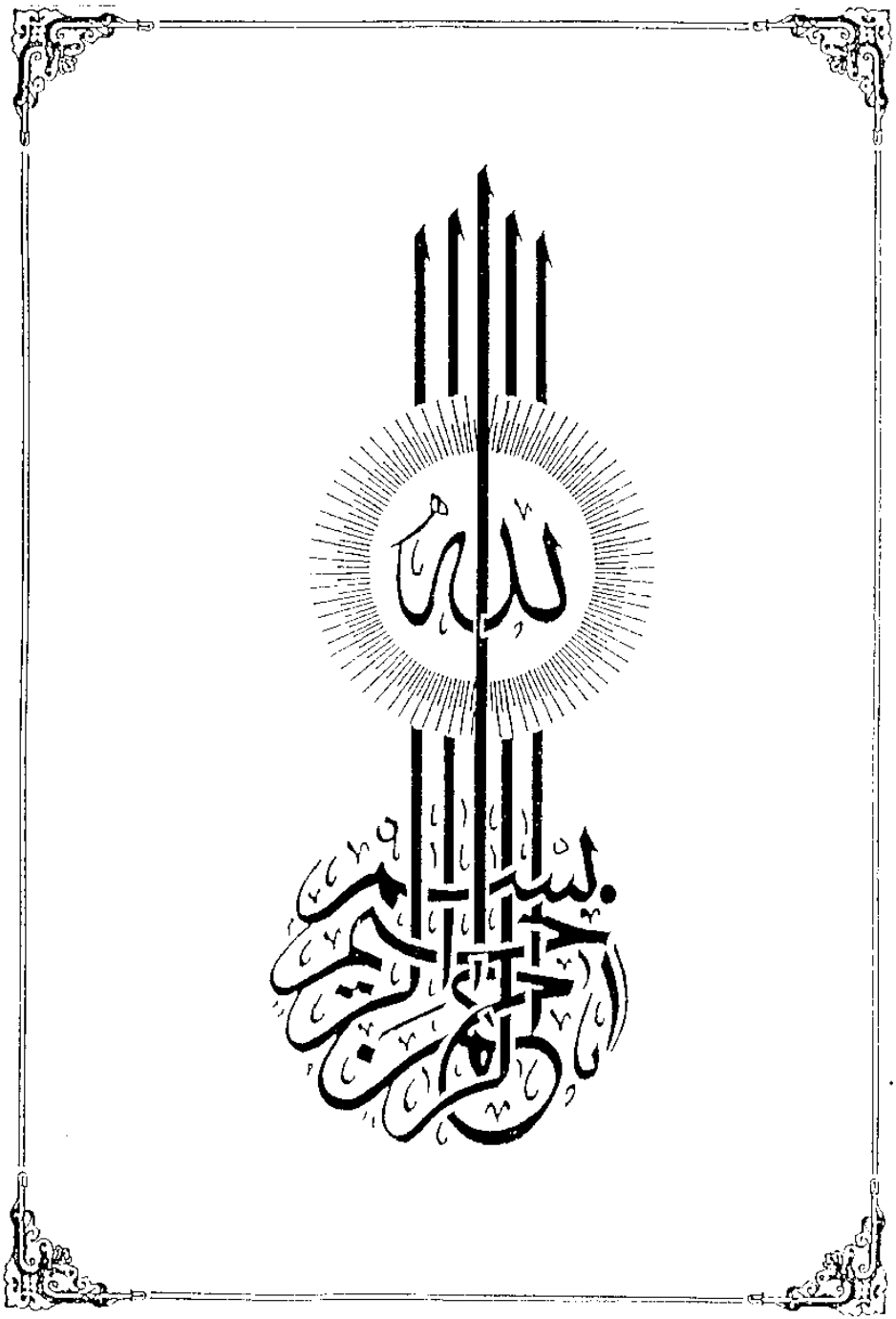

بسم الله الرحمن الرحيم

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Introduction

"Propofol" is a new intravenous anaesthetic agent chemically unrelated to barbiturate, steroid, imidazole, or eugenol. It is one of a series of alkyl phenols. It is also known as "diprivan" (trade name) and was previously known as "Disoprofol" (James and Glen, 1980).

Induction of anaesthesia with propofol is characteristically smooth, rapid, and reliable. Maintenance of anaesthesia by continuous infusion of propofol is characterised by smooth, easy control of the depth of anaesthesia and good haemodynamic stability. Rapid speed of recovery and high quality of recovery are two of the most striking features which characterise anaesthesia with propofol (Sebel, 1989).

Propofol has several advantages in particular rapid uneventful recovery that makes total intravenous anaesthesia (TIVA) with propofol suitable for day case surgery and when rapid ambulation and early return to normal activities are indicated (DeGrood et al., 1987).

Propofol, when injected intravenously, undergoes rapid and extensive distribution and rapid metabolic clearance. Propofol is metabolised, primarily in the liver, to form inactive conjugates of propofol and its corresponding quinol, which are excreted in the urine. Total body clearance of propofol is very rapid, with reported values exceeding estimates of total hepatic blood supply (1.5 liters/minute) following both bolus and infusion administration. It has been suggested that extrahepatic mechanisms may contribute to the metabolism of propofol (Servin et al., 1986; Cockshott et al., 1987; Dogra et al., 1989). Pharmacokinetics of ^{14}C-propofol that was administered during the anhepatic phase of liver transplantation have confirmed the ability of extrahepatic sites to metabolise propofol (Gray et al., 1992).

Propofol has minimal adverse effect on liver functions as evidenced by the absence of change in liver function tests such as aspartate transaminase (AST), alanine transaminase (ALT), or alkaline phosphatase after propofol and nitrous oxide anaesthesia (Robinson and Patterson, 1985). Also the pharmacokinetics of propofol given by infusion to maintain intravenous anaesthesia are not affected markedly by moderate liver cirrhosis (Servin et al., 1990).