ASSESSMENT OF RISK

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Despite more comorbid patients presenting for surgery , the perioperative mortality has decreased significantly over the last half century , especially in resource-rich countries. In a published systematic review in The Lancet by Bainbridge (2012), perioperative mortality has declined from 10 /uni00A0 603 per million (95% confidence interval [CI] 10 /uni00A0 423–10 /uni00A0 784) in the 1970s to 1176 per million (95%CI 1148–1205) in the 1990s /uni00A0 to 2000s (P < /uni00A0 0.0001). However, there remains a subgroup of patients who are at higher risk of morbidity and mortality after surgery . Patients who have a predicted mortality ≥ 5% should be considered as ‘high risk’. It is estimated that, although the high-risk group accounts for less than 15% of all surgical procedures, they contribute to more than 80% of all perioper ative deaths in UK. What causes these patients to be at a high risk of death and complications after surgery? After surgery tissue destruc tion, blood loss, fluid shifts and changes in temperature, pain and anxiety result in increased demands for o xygen delivery to the tissues. This demand increases from an average of 2 2 110 /uni00A0 mL/min/m at rest to 170 /uni00A0 mL/min/m in the postoper ative period. Most patients meet this increase in demand by increasing their cardiac output and tissue oxygen extraction. Patients who are unable to meet these demands, as a result of a limited cardiorespiratory reserve, are at a risk of oxygen debt. Occult hypovolaemia resulting from fluid shift or blood loss can further impair oxygen delivery . Splanchnic vasoconstric tion to compensate for this may result in gut ischaemia. Those with coronary or cerebrovascular disease are also at a higher risk of myocardial ischaemia or stroke. ASSESSMENT OF RISK

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