



Editorial

PRE-EMPTIVE SURGERY: A REAL CHALLENGE

Understanding the genetics of a hereditary disease and the development of human genome project provides a new challenge for surgeons in the form of pre-emptive surgery for genetically predestined malignant disease. Pre-emptive surgery is defined as the prophylactic removal of an organ at high risk for malignant transformation. Genetic testing for a number of hereditary syndromes such as multiple endocrine neoplasia, familial adenomatous polyposis coli, von Hippel-Lindau syndrome and retinoblastoma offers great opportunities for prediction and prevention of dissemination and death from cancer. The hereditary syndromes have identified mutations with high penetrance and provide an opportunity for pre-emptive surgery¹. Prophylactic mastectomy and oophorectomy are already offered to patients with BRCA-1 and BRCA-2 mutations. Thyroidectomy in patients who have RET mutation, performed under the age of 20 years, is accompanied by smaller tumors, normal basal thyrocalcitonin level and a decrease in the prevalence of established medullary cancer².

When such pre-emptive surgery is suggested for a premalignant disease, people demands a risk free procedure without any morbidity and will expect an operative mortality of zero, which practically is never achievable. For a child, any risk of permanent recurrent laryngeal nerve injury is serious and can be expected to be accompanied by significant opportunities for litigation. Prophylactic colectomy with ileo-anal pouch anastomosis for familial polyposis coli is accompanied by a 40 percent complication rate³, which is almost double that of ileorectal anastomosis, although the later does not prevent the development of rectal cancer. In hereditary diffuse gastric cancer, the average age of cancer diagnosis is 37 years in asymptomatic patients with germ line E-cadherin mutation⁴. There is series reported in the year 2000 describing an operative mortality¹ rate for total gastrectomy of 7-15 percent¹.

The morbidity and mortality associated with pre-emptive surgery in those patients who are future

possible candidates for developing cancer in a particular organ focuses on the accuracy of the predictive testing and evaluation of risk-benefit ratio. Informed consent is difficult to obtain when absolute certainty of the development of a subsequent malignancy cannot be provided. Therefore, pre-emptive surgery becomes an increasingly deeper concern for the patients, the surgeons and the health care system. For the purpose of achieving maximum benefit, pre-emptive surgical interventions require optimal judgment, adequate counseling and demands technical perfection and poses a challenging task for the surgeon.

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