Is Preventive Cholecystectomy for Gallbladder Carcinoma in Northern India Cost Effective?

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Dear editor, in a recent journal article on asymptomatic gallstones in India, it has been stressed that high incidence rates of gallbladder carcinoma have been found in Northern India and Pakistan and that there may be a cause for preventive cholecystectomy in young patients with large gallstones, but that there are no randomized trials comparing cholecystectomy versus no cholecystectomy in patients with silence gallstone [1].

The article was very well done and it was objective.

It has been documented that the main limit of secondary prevention of gallbladder cancer, also in Chile, is the high cost [2].

Prevalence rate of asymptomatic gallstones among general population in Uttar Pradesh (150 million inhabitants) is nearly of 20 %. It means that, in Uttar Pradesh, 30 million people have asymptomatic gallstones. The expected incidence of gallbladder cancer in Delhi could be nearly 40/100,000; it means that in Uttar Pradesh nearly 60,000 patients will develop a gallbladder cancer.

Among the 30 million people with asymptomatic gallstone, nearly 10 % will develop a symptomatic gallstone disease over a 10-years period (3 million patients/10 years). The mean hospital cost of laparoscopic cholecystectomy in India is €500. (The hospitalization cost, in Indian rupee,

for a laparoscopic cholecystectomy, if the actual change rate is of €1/Rs64, is nearly [Rs]Rs32000; source: website Ministry of Health, CGHS scheme, GOVT of India) We can calculate that, in the next 10 years, nearly 3 million patients will be operated for symptomatic gallstone disease in Uttar Pradesh and that the hospitalization cost would be €1,500 million/10 years (3 million × €500) (nearly Rs96,000 million/10 year); €150 million/year (Rs9,600 million/year). During the same 10-year period, 60,000 patients will have diagnosed a gallbladder cancer with a poor prognosis.

Secondary prevention of gallbladder cancer with laparoscopic cholecystectomy among asymptomatic gallstone population in Uttar Pradesh would cost €15,000 million/10 years (30 million × €500); nearly €1,500 million/year (nearly Rs96,000 million). The advantages would be 60,000 gallbladder cancers cured and the prevention of the benignant complications of gallstones disease, but hospitalization costs for the treatment of biliary diseases would have a tenfold increase.

Actually, the secondary prevention of gallbladder cancer with preventive laparoscopic cholecystectomy is recommended in selected high-risk group patients such as patients with large cholesterol gallstones (>3 cm), patients with porcelain gallbladder, patients with gallbladder polyps >1 cm, and patients with xanthogranulomatous cholecystitis and Mirizzi's syndrome that are usually associated with long-standing gallstones. The treatment for inoperable biliary tract cancer could have advantages using different drugs for different tumors such as cisplatin plus 5-fluorouracil or cisplatin plus gemcitabine for squamous cell gallbladder cancer, cisplatin plus gemcitabine for nonsquamous

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cell gallbladder cancer (adenocarcinoma) [2, 3], and cisplatin plus gemcitabine followed by erlotinib in cholangiocarcinoma [4].

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