ECOONOMIC ANALYSIS OF THE USE OF CONTRAST MEDIA DURING PERCUTANEITY CORONARY INTERVENTION (PCI) IN FRANCE AND SPAIN

Danchin N1, Maccaya C2, Tao WY3
1HEGP Hospital, Paris, France; 2Hospital University San Carlos, Madrid, Spain; 3The Lewin Group, Hoofddorp, Netherlands

OBJECTIVES: The isosmolar contrast medium (CM) iodixanol has been shown to reduce the risk of major adverse cardiac events and have a higher intervention success rate compared with the low-osmolar agent ioxaglate in patients undergoing PCI at high risk of complications. The purpose of this study was to assess to what extent this clinical benefit is associated with differences in health care costs for PCI patients in France and Spain. METHODS: A decision tree model was developed to compare the costs associated with receiving each CM in high-risk and low-risk patients. Clinical data were derived from published comparative clinical trials. Data on medical resource use associated with managing adverse events were obtained from panels of French and Spanish interventional cardiologists, and resource use was converted to costs using nationally representative country-specific tariffs. The study end-point was the difference in costs associated with receiving each CM in high-risk and low-risk patients. Clinical data were derived from published comparative clinical trials. The isosmolar contrast medium (CM) iodixanol confers an economic benefit as well as a clinical benefit in each study country. For low-risk patients a converse economic benefit is seen. When considering all patients these results suggest that the use of iodixanol confers an economic benefit if the proportion of high-risk patients exceeds 30% in Spain and 17% in France.

CONCLUSIONS: This study suggests that in high-risk patients undergoing PCI, the use of iodixanol confers an economic benefit as well as a clinical benefit in each study country. For low-risk patients a converse economic benefit is seen. When considering all patients these results suggest that the use of iodixanol confers an economic benefit if the proportion of high-risk patients exceeds 30% in Spain and 17% in France.

AN EVALUATION OF THE COSTS ASSOCIATED WITH ACUTE MI TREATMENT IN AND OUT OF HOSPITALS IN GREECE

Maniakakis N1, Fragoulakis B2, Liapis M3, Hatzikou M4
1University of Patras, Patras, Greece, Greece; 2University Hospital Patras, Patras, Greece, Greece; 3Boehringer Ingelheim, Athens, Greece, Greece; 4Boehringer Ingelheim, Athens, Greece

OBJECTIVES: To evaluate the inpatient and outpatient maintenance costs associated with treatment for acute myocardial infarction in the Greek NHS. METHODS: A database from a large NHS University Hospital was employed and analyzed. Resource consumption data were combined with 2003 price data to compute overall treatment costs. Inpatient costs of an uncomplicated AMI comprise all costs associated with treating an event in-hospital and these include the costs of wards, PTCAs, medications, cardiac ICU, etc. The marginal costs of having one of many types of events, such as strokes, reinfarction, etc, are also computed. The outpatient maintenance costs of patients include medication taken after the AMI for certain period or life-time, visits to professionals and rehabilitation in cases of events such as strokes. RESULTS: The costs of initial inpatient medication given is between €790 and €1000. The average cost of hospitalization is about €8,474 and the additional cost per event is as follows: stroke—€1,300, bleeding—€90, reinfarction—€1125, recurrent ischemia: 0, CHF—€61, hypotension: 0, cardiogenic shock—€1,730, electromechanical dissociation—€121, tamponade or cardiac rapture—€279, second degree atrioventricular block—€961, third degree atrioventricular block: €1,521, atrial fibrillation: €100, asystole: €121, acute mitral regurgitation—€1,415, sepal defect: €415, anaphylaxis: €300, pulmonary embolism: €2,050, arrhythmias: €100, hypotension: 0, pericarditis—€100. The cost of rehabilitation and maintenance is on average €915 in the first year plus €4.5 per day after discharge and during lifetime thereafter. Severe stroke is associated with an extra of €1,000 in the first year. CONCLUSION: AMI is an expensive to treat event. The cost of initial medication given is low in comparison with the total treatment cost within the hospital and after discharge. The associated events are also very expensive to treat and multiply total cost. Any reduction therefore in MI’s, given the high prevalence, will save the NHS and the taxpayer a lot of money.