

Nursing Management in Acute Myocardial Infarction

*Mrs. Leela Rajan Thamas

MYOCARDIAL infarction is one of the leading causes of death in the developed countries. In India accurate figures are not available, but it is seen that its incidence is on the increase with the changing life-patterns of our people. Factors that seem to be associated with this condition are, a genetic predisposition, obesity, high cholesterol diet, sedentary work, hypertension, smoking and lack of physical exercise. In acute myocardial infarction, a section of the myocardium becomes deprived of its blood supply due to coronary occlusion and as a result that area becomes necrosed. After an attack, the heart may continue to contract; but its pumping efficiency is diminished. With proper rest and treatment, the infarcted area heals with scar formation and after about ten weeks following the infarction, the scar tissue becomes firm and retracted.

Mr. John, a fortyfive year old, obese business man weighing 170 lbs., was admitted to the medical ward at 3 a.m. with excruciating pain in the chest, radiating to the left hand and shoulder. His B.P. was 90/50, pulse 100/mt and temperature 100°F. He was perspiring profusely and the skin was moist and cool. The patient was dyspnoeic and he looked anxious, with every muscle contracted. He belonged to a middle class Christian family and through dint of hard work, had got himself established in a business. His wife and two children, a boy of fifteen years and a girl of twelve years constituted his family. The patient has had no similar episodes earlier.

One of the major objectives in nursing Mr. John, was to give rest to the damaged myocardium in order to promote its healing, by decreasing the cardiac workload. Physical rest was accomplished in several ways. The patient had been given 1/6 gr. of Morphine I.V. in the casualty, just before admission. He was gently transferred to an adjustable bed with a dunlop mattress in a corner of the ward, close to the Nurses' station and was propped up in semi-Fowler's position. Nasal oxygen was started at 6 litres/mt. and was continued for 48 hours. The perspiration was wiped off and his wife was allowed to sit on a chair, by his side. Inj. Nembutal 100 mgs. was given, after 6 hours of admission, as the patient was very anxious and restless. Thereafter, a dose of Nembutal was given at bed-time and Phenobarbitone 30 mgs. was given Q8h. Severe pain may contribute to cardiac arrest in Myocardial

infarction, as it induces shock and arrhythmias through reflex mechanisms. Morphine relieves acute pain and is given intravenously, as in the presence of some degree of shock, the drug will not be absorbed well, if it is given by other routes. Mr. John had no chest pain 24 hours after the admission. Semi-Fowler's position helps in minimising the strain on the heart, as in this position, the vital capacity is increased due to the lowered position of the diaphragm. Also in this position the venous return from the extremities is minimum, which decreases the central venous pressure, which in turn reduces the work of the heart. Oxygen is administered in order to relieve pain, which is due to poor oxygenation of the myocardium. Also it is necessary to provide for the maximum oxygenation of the blood which circulates through the lungs that are usually congested. Nembutal and phenobarbitone are helpful in allaying anxiety and inducing sleep.

The provision of emotional rest to Mr. John was another major concern in his nursing care. As in the case of majority of the patients with acute Myocardial infarction, Mr. John manifested a high degree of anxiety. The concern the nurses and the doctors showed, was helpful in minimizing this. The quiet presence of his wife by his side, was another source of comfort. Although conversation with the patient was kept to a minimum for the first two days, he was told the reasons why certain restrictions were imposed on him and also the reasons for the investigations and treatment. The wife was involved in his care, as far as possible. Visitors were restricted to one at a time and only the immediate members of his family were allowed. They too were instructed not to excite him with any sudden news.

Several measures were taken in order to reduce the oxygen requirement of the body, which in turn, reduced the strain on his heart. For the first thirty-six hours he was put on absolute bed rest and everything was done for him in bed. During this period complete sponge and complete change of bedlines were avoided. The necessary care was organized and given with the least possible disturbance to the patient. He was put on a 1200 caloric fluid diet with two grams salt and 1000 ccs fluids. The diet was given in three hourly feeds, during his waking hours. A low caloric diet is given to keep the metabolic rate at a low level and salt and fluids are restricted to prevent pulmonary oedema. On the

*College of Nursing, Vellore.