Quality of life and longterm survival after intensive care discharge.

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Summary

From 1st January 1986 till 31st December 1986; 273 patients were treated in the Intensive Care Ward. The mortality in the Intensive Care Unit was 24.5%, mortality of patients 60 years and above was 35%. Of 187 patients who had survived, only 105 (56.2%) responded to the questionnaire, 39 (20.9%) did not respond and 43 (23.0%) could not be traced. Of the total discharged alive, 95 (51.9%) survived two years and eight (4.6%) died over the two years. Forty (41%) have returned to normal routine and are satisfied with their life style; 57 (59%) were not satisfied with their life style for various reasons, ill health being one. As regards patients above 60 years; 21 (53.8%) are alive and 10 (47.6%) are happy and satisfied with their life style.

Key words: Long term survival, quality of life (QOL), at own risk (AOR)

Introduction

Advances in technology have enabled intensive care physicians to intervene in life threatening and potentially dangerous diseases. This has also created some problems for the intensive care physician in the day to day management of the critically ill patient such as therapeutic, social, ethical and economic issues involved in the care of the critically ill. There are no easy answers to these issues.

It is very expensive to maintain a patient in the intensive care unit. It costs 4–5 times more than maintaining a patient in the general ward. Doctors have both a responsibility to care for the critically ill as well as a moral responsibility to the society which provides the funds. With limited funds, we have to be cost effective: an issue we cannot run away from. Yet can we equate cost with medical care? We have to make sure that we optimally utilise the limited resources and not prolong a life at great expense when the prognosis is grave. This has prompted us to look into the survival and quality of those patients who have been discharged alive from the intensive care unit of this hospital.

For this study, good quality of life is defined as reasonable health, mobility and feeling of well being. Patients were given the chance to decide whether they are satisfied with their life style. This is important as this is a very subjective assessment and the patients themselves have to decide regarding their life style and its quality.

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Patients and Method

General Hospital, Kota Bahru has a six bedded Intensive Care Unit serving a total of 750 beds consisting of Medicine, Surgery, Orthopaedics, Eye and ENT and Chest Medicine. It is under the supervision of the Anaesthesiologist. The Unit has a Sister-in-Charge with a patient : nurse ratio of 1 : 1. Indications for admission to the intensive care are:

1. Ventilatory support.
2. Invasive monitoring and
3. Intensive nursing.

All patients referred to the Intensive Care Unit (ICU) are received by the ICU team and accepted depending on the availability of beds in the ICU.

All patients discharged from ICU are followed up in the respective units i.e. medical patients are sent to the medical follow up clinic and so on. In this study, a questionnaire was sent to all patients discharged alive from 1st January 1986 till 31st December 1986. The personal biodata, initial diagnosis and final diagnosis were noted. Other details noted were duration of stay, ventilatory support and complications if any (see Table 1). We also looked particularly into the group of patients 60 years and above for the long term survival and their quality of life.

Table 1
Questionaire sent to the patients discharged alive from ICU

After discharge from ICU, are you well?
Were you readmitted into the hospital in the past two years?
If so, give dates and number of times?
When did you resume work?
Could you work as before? (before admission to ICU).
How is your health now?
If not working, give reasons.
Are you happy with your present health and life style?
Any other information/remarks regarding personal health.

Results

From 1st January 1986 to 31st December 1986 there were 273 patients admitted to the Intensive Care Unit. There were 175 males and 98 females; 211 patients were from the medical unit and 62 from the surgical unit – mostly post-operative patients. The mean duration of stay in ICU was five days. A wide variety of medical diseases were treated in the ICU with varying mortality (mortality rate for ARDS was 66 percent and there was no mortality from snake bite). The overall mortality for ICU was 24.5 percent, compared to the overall mortality for the whole hospital of 2.6 percent. The number of (AOR) voluntary at own risk, discharges of patient at the request of the relatives was 6.9 percent. Table 2 gives the number of deaths and AOR discharges for various age groups. During this period of study, there was no Paediatric Unit in our hospital but we had two surgical paediatric patients; one was a diaphragmatic hernia who died post-operatively. The other patient had intestinal obstruction with bronchopneumonia. He was discharged well from ICU.

Table 2
Deaths and AOR discharges:
ICU Hospital Besar Kota Bharu 1986

Age Groups	Number of Patients	Deaths	AOR Discharges
0 – 10 years	2	1	0
11 – 20 years	38	7	2
21 – 30 years	33	11	2
31 – 40 years	46	12	2
41 – 50 years	53	8	3
51 – 60 years	41	13	4
61 – 70 years	39	8	4
71 – 80 years	19	6	1
81 – 90 years	2	1	1

Of the 167 patients discharged alive in 1986, only 105 have responded; 39 did not respond and 43 could not be traced due to wrong addresses (see Table 3). During the two years, eight patients died (see Table 4). Ninety seven patients were alive at the end of two years after discharge from ICU. Table 5 gives the initial diagnosis on admission to ICU. Of the 97 survivors, 40 patients considered their health and life style good and they have returned to their normal routine. Fifty seven of the survivors have mentioned that they are not "very happy" and their state of health not good. Of these 57 patients, nine are working and the rest have many social and economic problems beside ill health. Among the 46 patients under 60 years who were not happy with their life style, 30 mentioned ill health as the main cause for their unhappiness.

Table 3
Response to questionnaire
ICU Hospital Besar Kota Bharu
N = 187 (100%)

Number responded	105	(56.2%)
Number not responded	39	(20.8%)
Number of non traceable	43	(23.0%)

Table 4
Long term survival and quality of life
N = 105

Number of survivors	– 97
Number of deaths	– 8
Number of patients with good health; happy life style	– 40
Number of patients with poor health and unhappy life style	– 57

Table 5
Initial diagnosis on admission of survivors at two years post I.C.U.
N = 97

Diagnostic Category	Number of Patients Surviving	Number of "Happy" Survivors. N = 12
Post-operative	22	16
Trauma	6	4
Cardiac failure	8	0
Renal failure	24	0
Poisoning (Snake bite)	6	4
Tetanus (Ventilated)	9	9
Respiratory (C.O.P.D. with failure)	8	2
Asthma	10	4
Gastro intestinal and miscellaneous	4	1

With regard to the patients above 60 years of age, there were 60 patients admitted to ICU (see Table 6). The immediate mortality among the patients above 60 years was 35 percent compared to the mortality of 21.3 percent for patients below 60 years of age. Out of 39 patients above 60 years discharged alive from ICU, only 21 have responded. We were unable to trace one and 17 did not respond to the questionnaire.

Table 6
Admission diagnosis of patients 60 years and above
N = 60

Diagnosis	Number of Patients	Number Ventilated	Number Died
Respiratory failure/insufficiency	24	13	4
Myocardial infarction	10	3	4
Pancreatitis	2	2	2
Tetanus	3	3	1
Head injury	1	1	1
Snake bite	2	0	0
Burns	2	0	0
Septicaemia	4	2	2
Chronic renal failure	12	1	1

Hence, 21 patients above 60 years of age were alive at two years after discharge from ICU. Ten of them feel well and are reasonably healthy and happy with their life style. Of these 10 survivors, the initial diagnosis on admission to ICU were as follows: two tetanus, one snake bite, four asthma, two acute exacerbation of chronic obstructive pulmonary disease (COPD) and one diabetes mellitus.

Discussion

Intensive care management is expensive in terms of equipment and personnel. It costs much more to maintain an intensive care patient than a patient in the general ward. The cost per day to maintain a patient in the intensive care unit in our hospital is $536.00 per day. There are many studies which have looked into the immediate survival[1] but very few on the long term survival and the quality of life[2,3] after discharge from the intensive care. In this country intensive care services are still "very young" and we accept all patients, as long as there is a bed available.

The high cost and staff shortage are putting pressures on our work. Thus we are faced by two forces; one our moral obligation in giving the best medical care to the critically ill patients and two, to be cost effective. Will the increased emphasis on cost efficiency and quality control reduce the patient to an impersonal product?[4] This is very real and can reduce our concern for the patient. A probability to be reduced and patient managed to a socially acceptable quality of life.[4] This should be the utmost aim of all physicians. We cannot equate cost with health care. In this hospital, the question of unnecessary prolonging of life is not a problem. As you can see from our results that if the patients are very ill, the relatives will insist that we do not give any active intervention and they may even take patients AOR (at own risk) discharge. In salvageable cases i.e. in patients with acute physiological score (APS) less than 10 and no multiorgan failure, we try to talk them out of it. The percentage of AOR discharge in this hospital for ICU in 1986 was 6.9%. The high cost of intensive care services has prompted demands for better evidence of the indications and benefits of intensive care services.[5] Many systems have been formulated for predicting and classfiying the severity of the diseases and one such system is the acute physiological and chronic health evaluation system II (APACHE II). This system has managed to classify a wide variety of patients prognostically based on the consistent relationship between the physiologic derangements and the risk of death.[6] These systems help in the therapeutic evaluation of intensive care units and the outcome of patient management. Even then in providing the intensive medical care, experienced clinical judgement and careful assessment of other factors like the individual's reaction and wishes of the patient, relatives and the society will have to be considered. The longterm survival and quality of life of the patient is very important in assessing the effectiveness of the ICU. Quality of life is a very subjective matter and most approaches to the assessment of quality of life (QOL) measurement should include an opportunity for patient to indicate whether they are satisfied with their life style.[7] In 1986, this hospital had 13,960 admissions. The number of patients 60 years and above was 2,332 (16.7%) whereas the ICU utilisation by patients above 60 years was 60 patients (21%). The overall mortality for the patients over 60 years of age was higher than for those under 60 years of age. At two years, 21 (53.8%) of the patients above 60 years are still alive and 10 (47.6%) of these survivors are "happy" and are leading a satisfactory life style. Whereas, for those under 60 years of age, the long term survival was 76 patients (51.4%) and 30 (39.5%) consider themselves to be happy and satisfied with their life style. Of all the patients discharged alive, 82 patients (43.8%) were lost to followup, eight patients (4.2%) died during the two year period and 97 patients (51.9%) were alive at the two year period after discharge from ICU. Of these survivors, 40 patients (41.2%) have returned to their normal life and are satisfied with their life style. The demand for ICU is going to increase over the years and the efficacy of the ICU is beyond doubt. In providing medical care to the acutely ill, the utilisation of the intensive care facilities must be assessed individually by the experienced clinician. The clinician must also take into consideration the health status and activity of the patient prior to the present illness.

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