Bridging the treatment gap: the secondary care perspective

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Protocols and integrated care pathways can be valuable in the hospital care of patients with heart failure or left ventricular systolic dysfunction after acute myocardial infarction. A designated member of staff, often a specialist nurse, must be responsible for identifying patients suitable for management by the protocol and for ensuring that the protocol is adhered to. A new training scheme for “limited echocardiography” might enable specialist nurses to investigate left ventricular function within the first 24 hours of admission. Patients should be discharged from hospital as soon as they are out of danger. At present, they are often kept in hospital for process reasons. A “continuing care” clinic run by a specialist nurse, where patients can be seen daily after discharge until they are stabilised, is one way of bridging the gap between secondary and primary care. Communication between secondary and primary care needs to improve and same day discharge summaries are essential.

In a patient with acute myocardial infarction (MI), the management of the MI itself may overshadow the management of heart failure or left ventricular systolic dysfunction (LVSD). There is a tendency for medical staff to concentrate on thrombolysis, rhythm disturbances, revascularisation, and resynchronisation therapy, with lower priority being given to pharmacological treatment of heart failure and LVSD. However, left ventricular function is one of the principal determinants of life expectancy after myocardial infarction and hospitals have an important role to play in establishing management objectives. It is well recognised that patients are more likely to receive the correct treatments long term if they are started in hospital.

The process of ventricular remodelling is thought to start immediately after the infarct and there is therefore good reason to start drugs for LVSD early. Of course, the early introduction of β blockers after infarction was recommended as long as 20 years ago by the early ISIS studies. There is also evidence that angiotensin converting enzyme (ACE) inhibitors should be introduced within the first 24 hours of MI if possible: the GISSI-3 trial showed that starting an ACE inhibitor (lisinopril) within 24 hours of symptom onset reduced mortality. Treatment for six weeks produced benefit at six months, with echocardiographic evidence of less remodelling. However, introduction of these drugs needs to be undertaken with some caution in view of the potential risks involved with treating previously hypertensive patients who have low blood pressure (< 120 mm Hg) on admission.

LOGISTICS OF MANAGEMENT OF HEART FAILURE

In the post-MI situation, the management of heart failure and LVSD is only part of the challenge. There are logistic issues to consider. For example, patients may be on a variety of wards, and they are often moved within the hospital during their stay. Many patients are not on the coronary care unit, and they may not be under the care of a cardiologist. In this situation, protocols and integrated care pathways can be valuable. Many hospitals now have both acute MI/chest pain protocols and acute heart failure protocols. It may be preferable for instructions for treating LVSD in the context of AMI to be incorporated into the AMI/chest pain protocol rather than the acute heart failure protocol, since it can be confusing if there are two protocols being implemented for the same patient.

The advantages of protocols are that they:

- provide the potential for standardised care, even if staff and location of patients change
- provide a “check list” to reduce the risk of tasks being forgotten
- increase the chances of the correct decisions being made.

However, protocols do have limitations. The patient has to be identified as suitable for a particular protocol, and the protocol has to be followed: the fact that the patient is being managed “per protocol” does not necessarily mean that the protocol is being adhered to. There can be problems with “unusual” patients who do not appear to fit the protocol, and some health professionals are concerned that use of a protocol will limit the scope for lateral thinking, particularly when the patient has co-morbidity.

IDENTIFICATION OF PATIENTS FOR PROTOCOL BASED CARE

All patients who come into hospital with an MI need to be identified and managed by the protocol. However, it is not sufficient to design a protocol and place it on the wards. A designated member of staff must be responsible for overseeing the process and for ensuring that

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Abbreviations: ACE, angiotensin converting enzyme; GISSI, gruppo Italiano per lo studio della sopravvivenza nell’infarto miocardio; GP, general practitioner; ISIS, international study of infarct survival; LVSD, left ventricular systolic dysfunction; MI, myocardial infarction
all patients are managed by the protocol. This responsibility is
often given to a specialist nurse.

The role of specialist nurses differs according to local
practice. Some hospitals have heart failure nurses and some
have chest pain nurses. One of the more difficult aspects of
the specialist nurse role is that if patients remain under the
admitting team, as is the case in some hospitals, the nurse
will need to work with different teams. These teams may be
more or less receptive to the nurse, who needs to know how
much he or she is allowed to do. There is no doubt that the
best system of management is for all patients to be admitted
under a cardiologist and to stay on a cardiological ward. In
this situation, the nurse knows exactly who he or she is
working with and what is expected of him or her.

If heart failure treatments are to be introduced within the
first 24 hours, echocardiography also needs to be available
within that time frame. This can be difficult to achieve as
echocardiography services are stretched in most cardiology
departments. The availability of portable echocardiography
machines on the coronary care unit can help, but there might
still be a problem in some hospitals because of difficulty in
recruiting suitably trained technicians. The British Society for
Echocardiography is currently developing a training scheme
for “limited echocardiography” to investigate left ventricular
function. In the future, specialist nurses might undertake this
training so that they can carry out echocardiography in the
first 24 hours and provide the data to inform the patient’s
subsequent treatment.

PATIENT DISCHARGE AFTER ACUTE MI

There is an unwritten rule in many hospitals that a patient
with an MI should stay in hospital for five nights. However,
in line with a general trend towards early discharge, many
centres, particularly in the USA, are moving towards early
discharge after MI if the patient is stable. The use of primary
angioplasty is associated with improved reperfusion and
potentially better outcomes following MI. The UK govern-
ment is funding a pilot project to study the feasibility of
introducing a national primary angioplasty service. However,
unless such a service were to be centrally funded, it is likely
that purchasers would only fund it if they could be persuaded
that it would result in earlier discharge; in other words,
that a reduction in length of stay would fund the service
development.

Patients need to stay in hospital if they have continuing
ischaemia, unstable cardiac rhythms, uncontrolled heart
failure (pulmonary oedema or a continued need for
intravenous medication) or if they require further pro-
cedures. However, at present patients are often kept in hospital
for “process” reasons, such as for making minor adjustments
to medication, for weighing, for blood tests, and for
echocardiography, all of which could be done on an
outpatient basis if the supporting processes were available.

When a post-MI patient is discharged there are still a
number of procedures to be carried out (Box 1). While further
investigations are definite secondary care type activities
and secondary prevention, lifestyle change and chronic disease
management are definite primary care type activities, the
other tasks listed could all be done by any health professional
with the appropriate skills in any setting. This provides an
opportunity for alternative arrangements to be made.

The traditional model for transition from secondary to
primary care is that a discharged patient is looked after in
primary care, and given a six week outpatient appointment.
However, primary care often has insufficient evidence on
which to base any decisions that might need to be taken
within that six week period. Consequently, with this
traditional model there is a reluctance to discharge patients
who are relatively stable but still need attention, such as for
adjustment of their drug treatment.

With the move towards earlier discharge, many tasks that
traditionally would be carried out in the hospital will now
need to be done on an outpatient basis. In this respect, there
is a case to be made for “continuing care” clinics, run within
secondary care, with the potential to see patients daily after
their discharge, if necessary, for continued uptitrating of
drugs, blood tests, and so on. The availability of such
clinics would mean that it is possible to discharge the patient
while keeping a close eye on them. The system would be
resource intensive and would need to be financed appro-
priately, but it could answer some of the problems associated
with the move towards early discharge that purchasers are
encouraging.

THE DISCHARGE PROCESS

More effort needs to be taken to achieve good communica-
tion between secondary and primary care. Various initiatives
should help with this, including the general practitioner (GP)
with a specialist interest scheme and the national programme
for information technology. It is also important to achieve
same day discharge summaries. Electronic discharge sum-
maries are increasingly being used and these give the
opportunity to suggest appropriate Read codes for primary
care to ensure that the patient is entered on to the practice
disease register. The discharge summary must contain future
management principles, which may involve joint protocols.

The GP needs to know why the patient is taking a particular
drug. For example, information on whether the patient is
taking an ACE inhibitor for hypertension or for heart failure/
LVSD will influence the GP’s response if the patient develops
side effects from their drug treatment. Details of follow up
arrangements (continuing care and planned investigations)
must also be included on the summary.

Learning points

- Systematic care is needed if heart failure management
  is to be optimised
- Systematic care requires sound clinical protocols and
  well trained people (often specialised nurses) to ensure
  that the protocols are put into action
- Early discharge is possible provided that daily follow
  up can be arranged until the patient’s condition is
  stabilised
- Good communication between secondary and primary
  care is essential

Box 1: Post-discharge activities

- Further investigations
- Titrating up drugs that have been introduced
- Monitoring progress
- Assessing response to treatments
- Keeping the patients abreast of their condition
- General patient education
- Rehabilitation
- Secondary prevention and lifestyle changes (for example, smoking)
- Chronic disease management
CONCLUSION

Left ventricular function is a key determinant of life expectancy after MI. The management of LVSD and heart failure should be incorporated into MI/chest pain protocols and there needs to be a designated individual—or more than one individual—who is responsible for identifying patients with MI and ensuring that they are managed by the protocol. Echocardiography needs to be available on day 1, so that the appropriate treatments can be introduced with as much background knowledge about the extent of the infarct as possible.

Patients should be discharged from hospital as soon as they are out of danger. There then needs to be a system for seeing patients daily after discharge to manage the process until the patient is stabilised. A “half way house” clinic, run by a nurse specialist, for patients who have recently been discharged is one way of bridging the gap between secondary and primary care. Following stabilisation, chronic disease management should be part of primary care operations.

REFERENCES