Fixation and bone grafting of scaphoid non-union

What is a scaphoid non-union?
It means that in the past you broke your scaphoid bone and it did not heal.

What problems does a scaphoid non-union cause?
The two fragments of the scaphoid bone have not healed and move against each other, causing arthritis between the bone fragments and in the surrounding joints. Jarring movements to the wrist tend to provoke pain and there is commonly pain on firm grip. If there is arthritis in the area of the scaphoid, the wrist may be stiff.

What will happen if I decide to leave the scaphoid non-union untreated?
There is evidence that your wrist will gradually become arthritic with reduced movements and increasing pain on use.

What are the benefits of scaphoid surgery?
Scaphoid fractures identified early have a 90% healing rate but the success rate for well established scaphoid non-unions is less satisfactory. You doctor will advise you as to the likely success rate of the procedure in your case.

If the scaphoid does heal you will be left with a stronger wrist, with a reduced risk of developing arthritis in years to come.

What are the risks and consequences associated with scaphoid surgery?
Most operations are straightforward; however, as with any surgical procedure there is a small chance of side-effects or complications.

Rarely, a wound infection may develop or you may experience some wrist stiffness. The scaphoid may fail to heal. The risk of failure to heal varies and will be discussed with you before surgery.

Some patients may end up with scar tenderness, which may be a persistent irritation to them. It is unusual for patients to experience significant ongoing difficulties with a tender scar.

A small percentage of patients after hand surgery will develop a severe reaction, with lifelong permanent pain and stiffness which is unresponsive to treatment.
**Alternative treatment**
If a scaphoid non-union is identified early, very prolonged plaster cast immobilisation may permit the bone to heal slowly, but this is unusual. The main choice lies between going forward with internal fixation or simply using the wrist and ignoring the fracture, which inevitably leads to the increased arthritis in the joint, usually with increasing pain and wrist stiffness. If you are concerned about any of these risks, or have any further queries, please speak to your consultant.

**What does the operation to heal the scaphoid involve?**
The procedure involves making a curved incision at the base of the thumb. It is usually 2 - 3 inches long. On occasions an additional piece of bone is required to heal the scaphoid non-union and this may be taken from within the area of the scar (from one of the forearm bones) or from the prominent part of your hip bone (iliac crest). The scaphoid bone is often supported with a screw to heal the fracture. A surgical arm cuff (tourniquet) will be used during the operation.

**Getting ready for the operation**
You will be asked to attend the Pre-operative Assessment Clinic. A nurse will discuss the operation with you. You may need to undergo some routine tests before your operation eg. heart trace (ECG), x-ray, blood test.

You should **not eat for 6 hours** before the anaesthetic/operation (chocolate, cappuccino and latte coffee count as food). You should **not have anything to drink for 2 hours** before the anaesthetic. Having a drink of water or clear squash until 2 hours before is fine. You can chew gum, but only until 2 hours before the anaesthetic - not after that time. You will be advised of the actual times.

You will be asked some routine questions about your general health, the medicines you take at the moment and any allergies you have.

You will be asked to sign a consent form to say that you understand what you have come into hospital for and what the operation involves.

You will be asked to have a bath/shower before coming into hospital (if possible).

**On admission**
You would usually be admitted to hospital as a day case (7.30am arrival if you are on a morning list, 1.00pm if you are on an afternoon operating list).

When you arrive on the ward you will be introduced to the staff and shown to your bed. Your details (name, date of birth etc) will be checked on a number of occasions before the operation. This is normal practice and is for your safety.

You will be given an operation gown and a wristband to wear.

A nurse or porter will take you on a trolley to the anaesthetic room.
What sort of anaesthetic will I have?
The operation will be performed under a general anaesthetic, which means you will be asleep throughout. Alternatively, the anaesthetist may freeze your arm with an injection to the neck (a brachial block). The anaesthetist will visit you before your operation and discuss the anaesthetic with you.

What should I expect after the operation?
When the operation is over, you will have your pulse, blood pressure, breathing and wounds checked regularly by a nurse.

It is usual to feel drowsy for several hours. You will be given oxygen through a facemask until you are more awake.

Anaesthetics can sometimes make people feel sick. The nurse may offer you an injection if the sick feeling does not go away, this will help to settle it.

You will have a drip running into a vein in your arm/hand until you are eating and drinking again.

Going home
You will probably be discharged home on the day of your operation; however, if you are very sore, we may keep you one extra day.

DISCHARGE INFORMATION AND AT HOME ADVICE
After the operation you may have 2 scars, one on your wrist and one on the top of your hip bone.

At the beginning you may find the pain in the hip bone to be more severe than the wrist. The pain will settle down over a couple of days and should not cause problems in the long-term.

You should keep the arm elevated for the first few days following surgery.

You will have a plaster cast on your arm. This will be changed after 2 weeks when your stitches are removed. The length of time you will be in plaster is variable, but it may last 6 - 8 weeks. Your doctor will give you more specific details of this after your operation.

Driving
You should not drive before the plaster is removed 6 - 8 weeks following surgery.

Time off work
If you are in a supervisory or managerial position that does not require full use of the hand, you could return to work within a few days of surgery.

Other occupations would require you to be off work until the stitches were removed at approximately 10 - 14 days.

If you have a heavy manual job you would most likely be required to be off work for considerably longer, unless lighter supervisory duties could be found for you.
Important information for day case patients
You must not drive or go home by public transport. Therefore, you must make arrangements for someone to collect you. It is not appropriate to go home unaccompanied in a taxi. Please note hospital transport and ambulances are not normally available for day patients.

The anaesthetic drugs remain in your body for 24 hours and during this time are gradually excreted from the body. You are under the influence of drugs during this time and therefore there are certain things that you should and should not do.

You should:
• Ensure that a responsible adult stays at home with you for 24 hours.
• Rest quietly at home for the rest of the day - go to bed or lie on the settee.
• Drink plenty of fluids, but not too much tea or coffee.
• Eat a light diet eg. soup or sandwiches. Avoid greasy or heavy food as this may cause you to feel sick.
• Lie flat if you feel faint or dizzy.
• Contact your GP if you have not passed urine 12 hours after your operation.
• Have a lie in the next day. It could take 2 - 3 days before the weariness wears off and you could suffer lapses in concentration for up to a week.

For at least 24 hours after your operation you must not:
• Lock yourself in the bathroom or toilet or make yourself inaccessible to the person looking after you.
• Operate any domestic appliances or machinery.
• Drink alcohol.
• Make any important decisions or sign any important documents.
• Be responsible for looking after small children.
• Watch too much television, read too much or use a computer as this can cause blurred vision.

If you have any queries, or require further information please contact your consultant’s secretary.

NHS Direct is a 24 hour nurse led, confidential service providing general health care advice and information. Telephone 0845 4647 or visit the website at www.nhsdirect.nhs.uk

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Reference Code: P0783/1166/09.2010/VERSION4
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