

PRACTICAL SKIN PROCEDURES IN GENERAL PRACTICE

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INTRODUCTION

My brief was to prepare an article on skin surgery. It is important that procedures are done correctly to ensure patient benefit, and the article describes practical skin procedures which can be performed in general practice. Thus the article goes beyond the brief of skin surgery and more comprehensively covers a range of techniques applicable to skin therapy.

WHAT PROCEDURES ARE POSSIBLE?

A variety of practical procedures may be utilised in general practice for the treatment of skin conditions. Table 1 summarises some of these techniques. The first part of this article describes the non-surgical treatments and the latter part surgical techniques.

PRACTICAL SKIN PROCEDURES IN GENERAL PRACTICE

Trichloroacetic acid treatment for xanthelasmata
Podophyllin treatment of genital or peri-anal warts
Liquid nitrogen treatment of warts
Surgical techniques (See Table 3)

Table 1

NON-SURGICAL SKIN PROCEDURES

Trichloroacetic acid treatment for xanthelasmata

Xanthelasmata may be a sign of hyperlipidaemia. After fasting lipid determination, appropriate dietary advice may ensure the disappearance of some of the xanthelasmata. However, patients may require treatment either because of a failure of dietary response or for cosmetic considerations. Although surgical excision will remove smaller xanthelasmata, it is easier (particularly with larger lesions) to utilise trichloroacetic acid treatment. 95% trichloroacetic acid is carefully applied to the xanthelasmata, using a stroking action with a sharpened orange stick. It is important that the tip is moistened but not wet with trichloroacetic acid, to avoid dripping the application on to normal skin. Eye contact should obviously be avoided and patients should be instructed not to wash their faces for a few hours after treatment. The area treated turns white after treatment and then there may be peeling and crusting of the area. Retreatment may be necessary, every six to eight weeks. Very good cosmetic results are usually achieved with the method and patients are generally pleased with the technique, which is quick and easy to perform.

Podophyllin treatment of genital or peri-anal warts

Genital or peri-anal warts may be treated in the special

clinic, or alternatively the gynaecology or dermatology departments and some patients may self-select referral. Although some genital or peri-anal warts are non-sexually transmitted (particularly in children), the possibility of associated sexually transmitted disease should always be borne in mind, particularly if there are associated features such as discharge or there is an "active" sexual history. Some genital or peri-anal warts may require hospital referral because of their nature, size or associated problems. However some patients could have their warts treated adequately in general practice, particularly if primary treatment has been instigated in a hospital department. The application of 25% or 50% Podophyllin (commonly in tinc. benz. co.) can be performed by a doctor or practice nurse on a regular basis weekly or fortnightly until resolution of the wart, and the patient can sometimes continue therapy as necessary. Warts of doubtful nature or particularly resistant warts should be referred for hospital advice and treatment.

Liquid nitrogen treatment of warts

Viral warts are common and patients (or with children, their parents) often request treatment. There is no doubt that many warts will clear spontaneously and there is a lot to be said for conservative management. However, warts may require active treatment if painful or disfiguring. The patient with multiple warts related to immunosuppression may require hospital referral but a patient with simple uncomplicated warts can be treated satisfactorily in general practice. A single wart may be treated surgically by curettage and cautery (see later in article). Liquid nitrogen treatment may be an option for single or multiple warts, particularly if topical remedies have not achieved clearance of the lesions.

Liquid nitrogen by its cooling effect may be virotoxic and also, by destroying the wart architecture, can encourage host immunity to destroy the wart. In hospital, a cryospray or cryoprobe instrument can be used for liquid nitrogen application but the equipment can be expensive. For general practice, the simple use of gallipots and cotton wool buds can usefully be employed for wart treatments (Table 2).

EQUIPMENT REQUIRED FOR LIQUID NITROGEN TREATMENT OF VIRAL WARTS

Liquid nitrogen
Container for liquid nitrogen (usually a metal flask)
Gallipot
Cotton wool buds

Table 2

The liquid nitrogen can be obtained from a hospital or industry and a regular contract can ensure supplies. The liquid nitrogen will keep for a few hours in a robust metal (nonbreakable/nonshatterable) thermos flask, remembering to have a hole in the top to allow expansion as the liquid

nitrogen evaporates. Liquid nitrogen can be poured into a gallipot (preferably metal) and used as required. A cotton wool bud is dipped into the liquid nitrogen and then applied to the wart (Figure 1). Cell injury mostly occurs during thawing and the time of application will determine the depth of injury but not the degree of injury. Thus more superficial warts will only require a brief application to freeze the wart, whereas deeper warts (particularly plantar) will require a longer application. Multiple freeze-thaw cycles will cause more injury than single freeze-thaw cycles, but can be utilised for larger or more resistant warts. The time of application will vary between patients and will depend upon the site and size of the wart and pain threshold of the patient. Liquid nitrogen can be painful, particularly for children and treatment should not become "tests of nerves" for either the person treating (doctor or nurse) or the patient. The times of liquid nitrogen application generally vary from 5-30 seconds depending upon the individual problem. Repeat treatments may be organised if necessary and the practice nurse may wish to be involved in liquid nitrogen therapy.

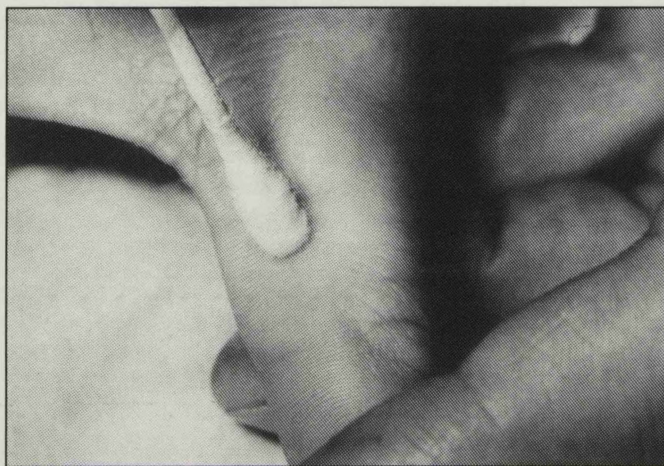


Fig 1 – Liquid nitrogen treatment of hand warts

SURGICAL SKIN PROCEDURES

A variety of surgical skin procedures are possible in general practice. Although financial considerations may encourage minor surgery, this should not be an over-riding factor, and the main reason for increasing this type of treatment is to benefit the patient. Some procedures appropriate for general practice are listed in Table 3. Whatever procedures are utilised, some basic equipment is necessary for the techniques.

SURGICAL SKIN PROCEDURES

Curettage and cautery
Cutting cautery
Snip cautery
Straight or elliptical excision
Delineated excision and cautery
Shave excision
Skin biopsy

Table 3

Equipment Requirements (Table 4)

Adequate space is important and this should include an adequate area for a couch and appropriate lighting. There should preferably be enough area for an assistant. Many

surgeries will already have their own sterilising equipment for instruments but if necessary contracts should be arranged with a local hospital to have access to CSSD facilities.

A defibrillator is optional but it should be remembered that a reaction to local anaesthesia is a theoretical possibility. An ECG machine will allow assessment of patients when necessary but generally when a patient appears fit enough, then they are usually fit for local anaesthesia. The younger more fit patient is often more of a problem because of occasional fainting during or after the procedure and care should be taken during pregnancy.

EQUIPMENT REQUIREMENTS

Basic –	Space Couch Light Sterilising equipment or access to CSSD
Specialised –	Cautery machine Curette Scalpel handle and blade Forceps Swabs Cleansing agent Needle holder and artery forceps + suture material Dental needle and syringe Trolley ECG machine Defibrillator (optional)

Table 4

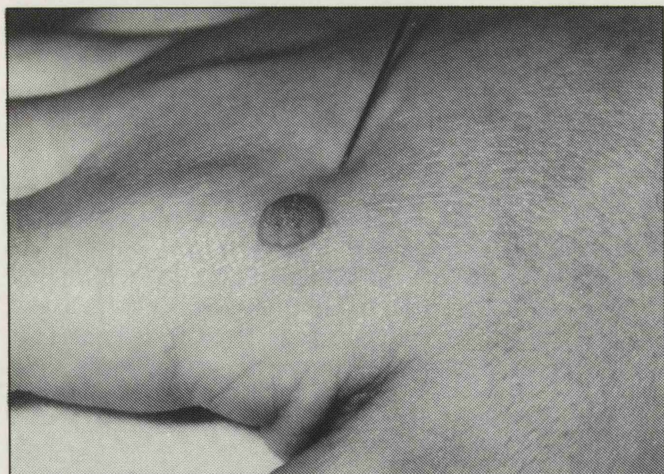
The cautery machine is a useful piece of equipment. Cautery is generally employed after curettage (see later) and is useful to complete the procedure by ensuring adequate haemostasis. A curette is a spoon-shaped instrument (see curettage and cautery) and a scalpel blade and handle are necessary for excisions. Swabs and skin cleansers are necessary and also needle holders for suturing. Artery forceps may be necessary for haemostasis and a dental needle and syringe allow more controlled local anaesthetic infiltration. The choice of suture material depends upon the nature of the operation (see later). A trolley is necessary for storage of instruments during the operation.

It is important to plan procedures and ensure adequate time to give the best possible results. Hurried or inadequate skin surgery doesn't help anyone, least of all the patient.

Local anaesthesia

Patients requiring minor skin surgery will receive local and not general anaesthesia, if performed in general practice. Emla cream can be applied in very minor situations but it generally does not replace local anaesthetic infiltration as a method of skin anaesthesia for most skin surgery. Local anaesthetic (either Lignocaine or Xylocaine) is most easily administered using a dental syringe and needle but if not available, a disposable syringe and narrow gauge needle can suffice. For most minor surgical procedures, either 1% or 2% Lignocaine/Xylocaine with or without adrenalin is used for skin infiltration. Adrenalin helps minimise bleeding but should not be used (because of potential ischaemia) on hands or feet (including fingers and toes), genitalia and in elderly patients on lower legs. The rare patient who is Lignocaine-sensitive should be referred for hospital advice.

The stinging discomfort of local anaesthetic administration can be minimised by reassurance, the use of a



dental syringe and needle, careful and slow administration and sometimes with light squeezing or pressure on the skin at the site of injection. Furthermore, it is important to wait for a few minutes after infiltration to allow the anaesthetic to take effect before embarking upon surgery. Usually 2-4 mls of local anaesthetic are required for most procedures and in general practice it should not be necessary to use more than 5-10 mls for a patient.

Curettage and cautery (Fig 2 & 3)

A lesion is scraped from the skin using a curette. More superficial lesions such as seborrhoeic warts or actinic keratoses are suitable for curettage and cautery. After curettage the area is cauterised to ensure haemostasis.

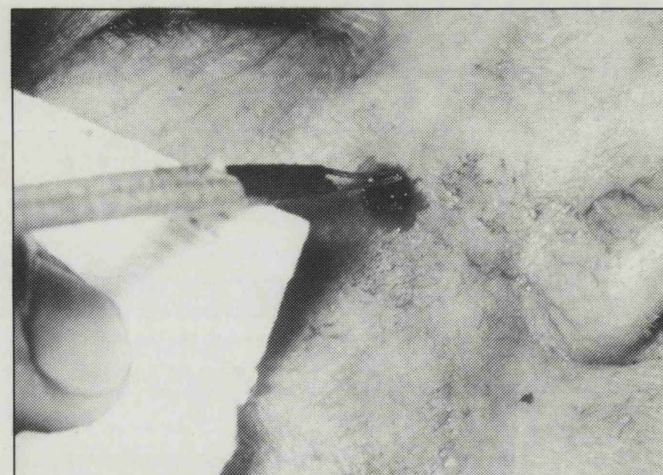
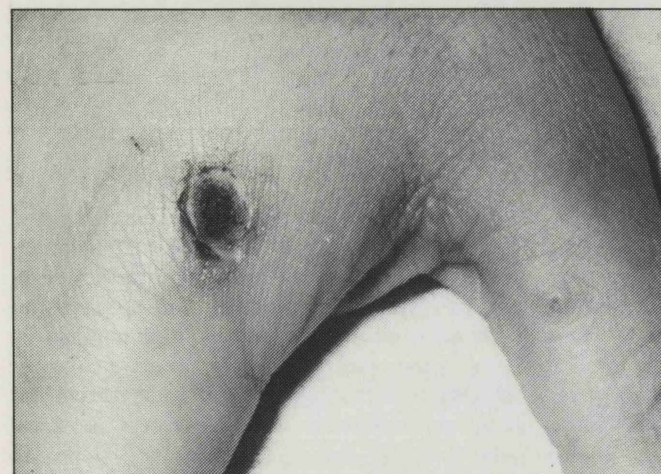
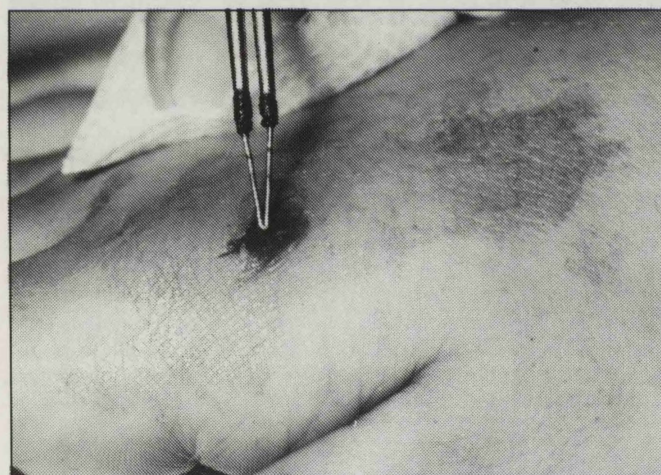
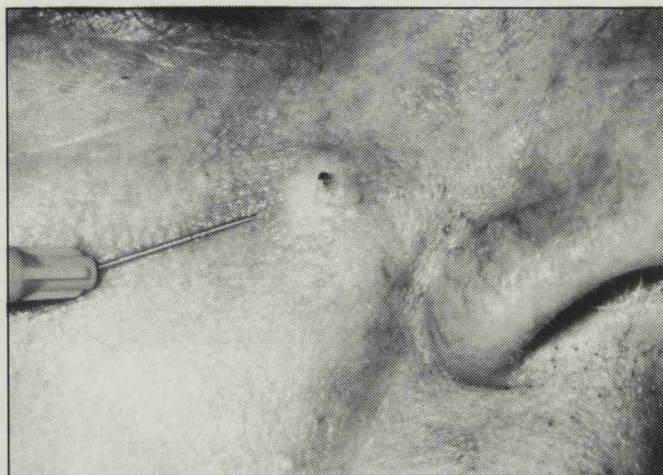
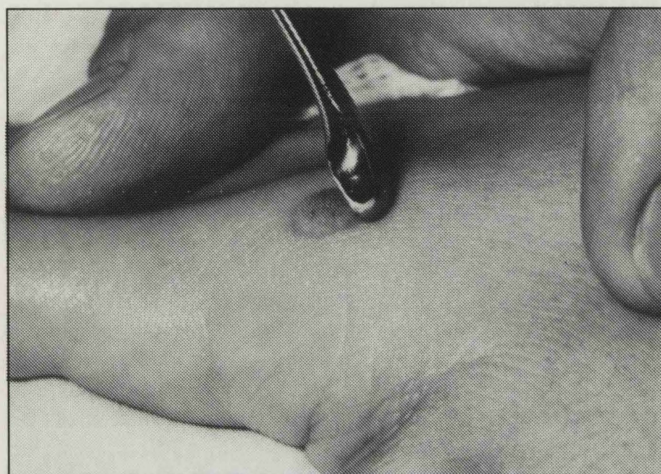


Fig 2 – Curettage of hand wart

Fig 3 – Curettage of actinic keratoses

Cutting cautery (Fig 4)

The lesion is gripped using forceps and then a flat cautery end is used to cut through the base of the lesion, often a skin tag or pedunculated benign mole.

Snip cautery

A pair of scissors is used to cut through the base of a narrow pedicled lesion such as a simple skin tag. Cautery is necessary after removal of the lesion, using a cautery machine or silver nitrate.

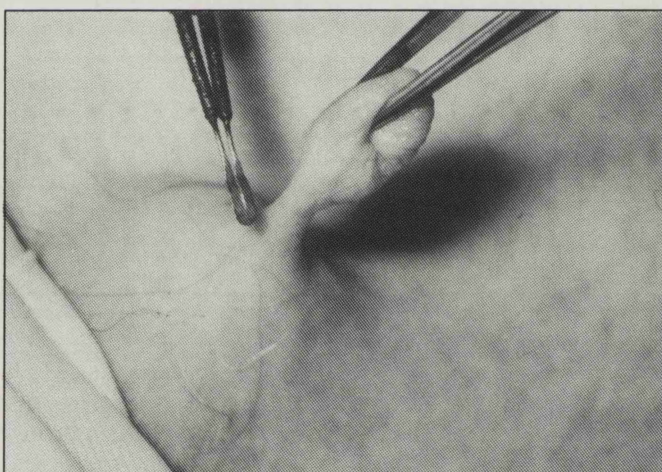
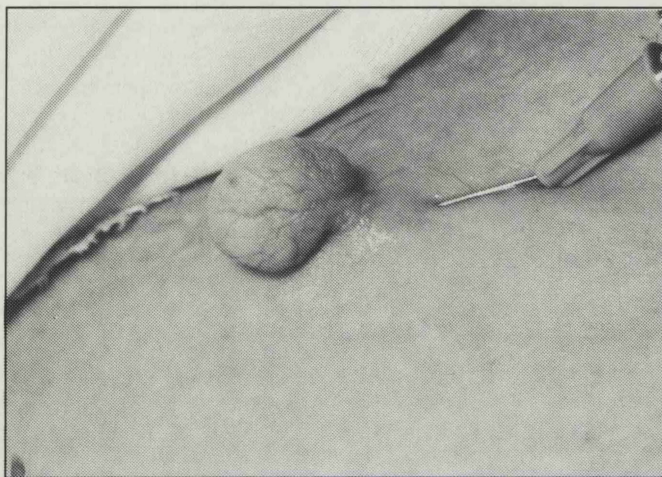


Fig 4 – Cutting cautery of a pedunculated skin tag or fleshy mole

Straight (elliptical) excision

Sebaceous cysts are the commonest lesions in general practice which may benefit from elliptical or straight excision. Planning of incision lines and care of the wound is important for the eventual cosmetic result. For larger wounds, two layers closure is advised to prevent wound dehiscence. However, for smaller wounds and particularly when the cosmetic result is not vital, a one-layer closure technique may suffice. The type of suture and timing of suture removal depends upon the nature of the operation.

Delineated excision and cautery

For dermatofibromata or other smaller skin tumours when the diagnosis is certain, delineated excision (cutting round and dissecting out the lesion) with subsequent cautery, may be an alternative method to straight or elliptical excision. It is important that the technique is not used for malignant lesions or lesions of doubtful diagnosis.

Shave excision

Benign and protuberant small lesions such as fleshy moles can be removed by shave excision. The lesion can be shaved flat using a scalpel blade and the base lightly cauterised.

However the technique should only be used in general practice for known benign lesions and not for cosmetic operations.

Skin biopsy

A skin biopsy is not usually acceptable for skin tumours, but may be employed for some medical conditions of the skin. If responsibility for biopsy is taken, then responsibility for management should also be undertaken since it is not appropriate to biopsy and diagnose and then pass over responsibility to the hospital. It may be appropriate to biopsy an elderly or immobile patient unable to come to hospital but only if this will help in his or her management, if necessary in liaison with the hospital. Clinical knowledge of conditions is then important to be able to distinguish which patients may benefit from biopsy and also interpretation of histology information may be necessary. Usually in this situation, hospital referral is necessary for the patient rather than indiscriminate biopsy.

PATHOLOGY

It is important that all skin lesions removed are sent for histological assessment, the only possible exceptions being a simple skin tag or straight forward seborrhoeic wart (particularly if there are multiple lesions). Skin specimens should be handled carefully to avoid trauma artefact, and transport to the laboratory should be in formal saline in a universal container. Correct labelling is important and the histology report should be fully completed with adequate clinical information including the site and nature of the lesions and, if possible, a provisional clinical diagnosis. The presence of any previous history will also help the pathologist with interpretation of the specimen. The usefulness of the histology report is in part dependent on the adequacy of clinical information. This is particularly important when malignant or potentially malignant skin conditions are being assessed.

WHEN TO AVOID SKIN SURGERY

Skin lesions of uncertain nature or malignant conditions should not be operated upon by general practitioners (Table 5) unless they are fully confident of the diagnosis and

WHEN TO AVOID SKIN SURGERY IN GENERAL PRACTICE

Squamous cell carcinoma
Basal cell carcinoma
Malignant melanoma
Dysplastic naevi
Any known malignant lesion
Lesions of uncertain nature

Table 5

management. This may mean a knowledge of anatomy and surgery techniques as well as the ability to predict adequacy of tumour clearance. Furthermore, as mentioned above, interpretation of the histology report may be necessary to decide upon any future management. The simple message is, if in doubt refer the patient for hospital advice or management. Inappropriate surgery is poor management and should be avoided. Malignant melanoma is the most important tumour to refer for hospital advice. There are tumours that can mimic melanomata (Table 6) and these should be considered in the differential diagnosis of a

DIFFERENTIAL DIAGNOSIS OF MALIGNANT MELANOMA

Pigmented actinic keratosis
Pigmented seborrhoeic wart
Pigmented dermatofibroma
Haemangioma
Pyogenic granuloma
Secondary deposit

Table 6

pigmented lesion of the skin. The more active moles or dysplastic naevi are lesions which should be excised for histological assessment but again, if in doubt, refer the patient for hospital assessment. There are changes in moles which can raise the suspicion of malignancy (Table 7) but

FEATURES OF MALIGNANCY IN MOLES

Alteration in pigmentation
Increase in size
Irregularity of margin
Bleeding, ulceration, inflammation
Itch

Table 7

sometimes the changes can be subtle and overlooked by both patient and doctor. Increased public awareness of skin cancer and a real increase in the incidence of skin cancer (which is likely to be more significant in the future) means that diagnostic accuracy is very important. The general

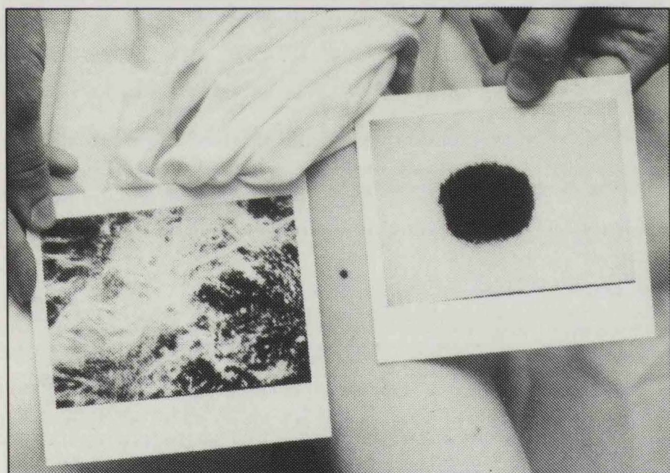


Fig 5 – Pigmented lesion on arm viewed at magnification 25x and 200x using imaging equipment

practitioner may only achieve a 50% diagnostic accuracy, the consultant 80% but never 100%. This means that it is important to refer lesions of uncertain nature for hospital advice where there is access to technological help such as surface imaging and methods of quantifying parameters such as colour, depth and structure (Figure 5). These measurements can help decide upon treatment and management.

PROBLEMS OF SKIN SURGERY

Only known benign lesions should generally be operated upon in general practice and it is important to operate within one's capabilities. Some general practitioners with surgical training or interests may operate on some simple malignant tumours such as straight forward basal cell carcinomata but usually such lesions should be referred to hospital for advice and management. Cosmetic surgery should be avoided in general practice and people with a keloid tendency should be operated upon with caution.

Skin surgery and Hepatitis B/HIV precautions

All doctors performing skin surgery should be immunised against Hepatitis B. It is important to minimise contact of the operator's skin or mucous membranes with blood, and gloves plus masks should be worn when indicated. When operating upon a patient with known Hepatitis B or HIV infection, or upon a person who is thought to be at risk of such infection, it is imperative that there is enhanced care to minimise contact with blood and such a patient should generally be referred for hospital advice on management.

CONCLUSIONS

Practical skin procedures, including skin surgery, are straight forward techniques that can enhance patient management in general practice. It is important to be selective in the choice of skin lesions requiring operations and also plan the type of operation. However, diagnosis is important and the clinical findings can help management in association with the histological assessment of the problem. With careful thought and planning, minor skin surgery and other skin procedures can benefit patients.

ACKNOWLEDGMENTS

I wish to thank Jennifer Barker for typing the manuscript, and Yvonne Dickinson and Paul England from the Medical Photography Department for their help with illustrations.

From the minutes of the medical committee meeting 19th September 1896

At a meeting held on the above date the following were present:

CN Dean CA Rayne W Hall JH Irvin

It was proposed by Dr Hall and seconded by Dr Rayne that the committee be requested to obtain the necessary apparatus for taking radiographs by means of the Roentgen rays.