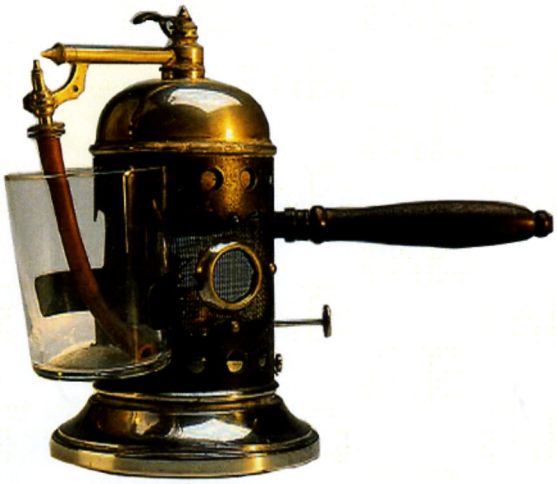
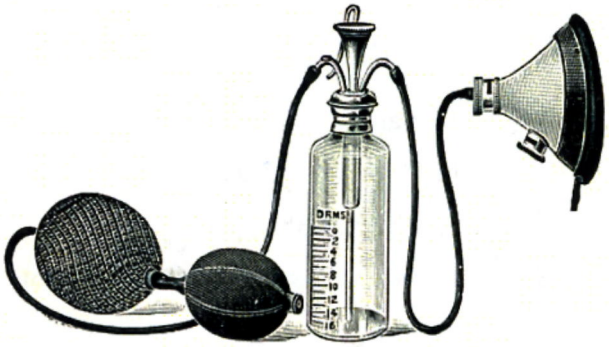
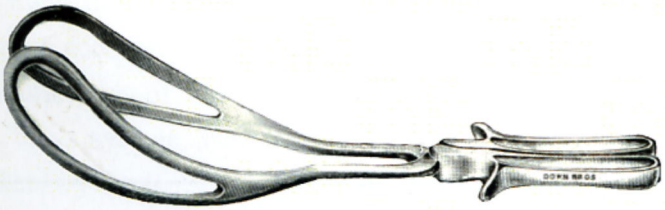




The Historical Medical Equipment Society



BULLETIN NO. 18 ISSN 1366 - 4719 AUGUST 2007

EXECUTIVE COMMITTEE

Chairman

Dr John Prosser
32 Albany Terrace
Worcester WR1 3DY
Tel. 01905 20387
email: johnprosser2005@yahoo.co.uk

Secretary/Treasurer

Dr Tim Smith
"Streams"
West Kington
Chippenham SN14 7JE
Tel. 01249 782218
email: drtgcsmith@aol.com

Bulletin Editor

Mr John Kirkup
1 Weston Park East
Bath BA1 2XA
Tel. 01225 423060
email: john.kirkup@doctors.org.uk

Committee Members

Mr Alan Humphries
Dr Nasim Naqvi
Dr Peter Mohr

CONTENTS

FUTURE MEETINGS

EDWARD JENNER MUSEUM, Gloustershire - SUNDAY 7th OCTOBER 2007
SHEFFIELD - Provisionally Spring 2008

EDITORIAL

Ten years after our first meeting, it is opportune to examine the Society's progress and objectives. If our membership has increased but slowly, I believe we reflect the curatorial expertise of important British medical and surgical collections and also the interests of individual members with particular erudition in many specialist fields. In addition, we have gained from the experience of locally invited speakers at our meetings. Most importantly, the Society has opened up lines of communication to assist members, and non-members, with queries especially with respect to the recognition of instruments and equipment, maker's marks and their dates of manufacture. And if we do not have an answer, we are able to suggest alternative sources of enquiry, often based on member's visits and contact with museums and collections abroad.

For example, if we simply examine the papers delivered at the excellent HMES meeting in Exeter last May, we find evidence of this co-operation and specialist knowledge. Mick Crumplin's account of early 19th century military and naval instrument sets was able to connect one of these with an outstanding Exeter surgeon, by virtue of mutual interests in military surgery with Dr Kremer in Australia who owns the set. Peter and Julie Mohr's fascinating account of delivering penicillin on the battlefields of World War Two by means of a brass syringe, manufactured skilfully in the field by the Royal Electrical and Mechanical Engineering Corps, is further enhanced by the instructed observation of Dr Kremer, a guest, that the brass tube was made from the oil-can of a Bren gun! Derrick Baxby's welcome contributions to the Bulletin continue with an account of an unusual form of veterinary fleam, made by Salles and Graillot, Parisian makers whose detailed background was revealed by Alan Humphries profound expertise in tracing catalogues; how much we rely on Alan and the remarkable catalogue library at the Thackray Museum in Leeds!

Among guest speakers we thank the Centre for Medical History of Exeter University and especially Mary Carter for telling us about their important work in employing objects to engage and instruct students, and to emphasise that historical documentary evidence becomes greatly enlivened with actual specimens in hand. I have believed for many years that historians need to follow archaeological practice where possible, as proven by the enthusiastic reception of the handling collection of the Royal College of Surgeons of England by visiting students. Holding and inspecting a bleeding lancet or heavy amputation saw of the 18th century provides telling information not evident in descriptive material or two-dimensional diagrams.

Andrew Knox's account of the surgical equipment changes which have revolutionised oesophagectomy over the last 80 years also raised an interesting hypothesis. He suggests today's emerging technologies, due to advances in science not designed primarily with surgery in mind, are looking for surgical problems to resolve whereas in the past surgery itself initiated instrumental change. Whilst this may be true in a few instances, it is always the case that there has to be a surgical problem initially and, in the past, the time lag between discovery of new possibilities and application was often prolonged whereas today , application is rapid. For example the introduction of cast or crucible steel introduced for the manufacture of watch springs about

1750 was not applied to surgical instrumentation for some decades, despite its advantage in producing light, strong and reliable instruments Likewise, silver and nickel plating of about 1840 only filtered slowly into the protection of instruments against corrosion. However, when stainless steel was formulated for the rifling of gun barrels in 1913, it soon entered the domestic cutlery market and by late 1916 was applied to surgical instruments. By contrast, surgical solutions have sometimes initiated concepts applied later to other crafts. Thus, the first hand chain saw devised in 1785 by Aitken, specifically for dividing the symphysis pubis, was later imperfectly mechanised for major bone section; yet it was only many years later that it was appropriated for another purpose, that is tree-felling. Likewise exploration of the bladder with lithotrites in 1826 and cystoscopes in 1879 lead the way towards exploration of industrial pipe-work and other dark corners. However, I agree with Andrew Knox that today's scientists and entrepreneurs are seeking applications for their discoveries within other disciplines, including surgery and medicine which thus are in immediate focus for technological improvement. Other papers were given by Christopher Gardner-Thorpe who hosted the meeting and by Professor David Radstone. It is hoped to include these in a later Bulletin.

Unfortunately the proposed visit to the interesting Mediaeval Hospital at Lessines, Belgium in October had to be cancelled for insufficient support. We are hoping the October meeting will take place at the Edward Jenner Museum in Gloucestershire. A separate announcement should reach you shortly.

We have never had a correspondence column in the Bulletin but anyone who wishes to comment on or question items in the Bulletin will certainly have their letter reproduced. As I have emphasised in the past, accounts of visits to unusual historic medical sites, here or especially abroad, or on any subject within the Society's remit is encouraged. In particular, suggestions to improve the Bulletin or meetings of the Society are very welcome.

In the next ten years, the Society should continue to profit from the growing appreciation of the significance of discarded objects as aids to understanding humanity's past, and it is anticipated the Society will continue to contribute to this understanding.

MEDICINE THROUGH TIME – TEACHING TOOLS

MARK JACKSON, MARY CARTER AND MADDY MORGAN

This presentation is based on our current project "Medicine through time: developing links with learners", funded by the Wellcome Trust, with partners from the Centre for Medical History, Imaginarium Education Consultants and Devon and Exeter Medical Society. The partners formerly worked on a pilot project "Surgery and society, 1800 – 2000", also funded by the Wellcome Trust, based on the Devon and Exeter Medical Society's collection of medical and surgical instruments (totalling approximately 2000 items); we now make a regular contribution to the University of Exeter's Widening Participation programme of events. The current project also encompasses the development of a teaching and a handling collection, and an interactive Web site (1) to underpin the learning gained by hands-on activities.

The media has shown an interest in our project, with a full-page dedicated to our work in the Exeter Express and Echo (February 2006) whilst The Times Higher Education Supplement (December 2005) included a light-hearted item about the collection and West-country Television covered our contribution

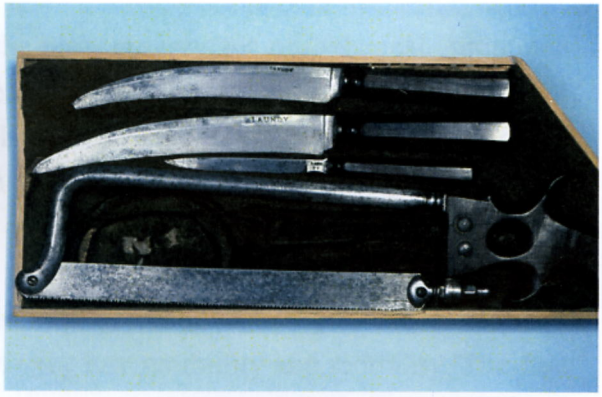


Fig.1 Amputation set, c. 1800

The Widening Participation initiative is designed to increase the intake of local applicants from deprived areas to the University. Our sessions complement the 'Medicine through Time' GCSE course and allow the students unprecedented 'hands on' access to the instruments from our handling collection. In our early sessions, we used a range of instruments, including an amputation set (fig. 1) and forceps, to enhance participants' appreciation of the changes in medical technology and understanding over time by identifying mystery objects in a "Call my Bluff" quiz.

Participants also made pills with period items

Fig. 2 Medicine chest, c. 1775

by grinding inert materials using a pestle and mortar, weighing them to very precise measures, mixing and rolling pills. Their understanding of the development of pharmaceutical techniques and the changing role of the GP and pharmacist was enhanced by access to

objects from the collection, including a 17th century medicine chest (fig. 2), pessary machine, tablet (rice paper) machine, pill rollers and an Exeter pharmacist's record book.

Last year a group of school children were given three items from the collection: a nurse's cap, a vaccination kit and a print of a cartoon depicting the 1840s cholera epidemic, and were given three days to produce an imaginative report. The results were an audio podcast charting the medical treatment of smallpox and vaccination, and a video podcast reporting the development of the nursing profession.

During a collaborative workshop between the Centre for Medical History, Archaeology and Forensic Chemistry in April 2007, participants were presented with two "bog bodies", apparently found near the site of the Augustinian Monastery at Soutra in south east Scotland. The archaeology session helped them to discover the bodies' identities and when they lived. Forensic chemistry allowed them to experiment with DNA. Our Medical History session identified herbs found with the bodies and their uses, and recreated the way in which they were prescribed in the 14th century.

Unusual items within the collection have provided new research opportunities for medical historians. For example, we have found an early twentieth century "Histon" apparatus set, for the diagnosis and treatment of "allergy". Professor Mark Jackson, whose research interests include the history of allergy, had not come across this type of equipment prior to exploring the collection, hence this unexpected discovery suggested a new avenue of investigation. Although documentary evidence (2) regarding medical treatments has been freely available, the discovery of, for example, an inhaler (fig. 3) in the collection has added a further dimension to our knowledge of asthma treatment in the early twentieth century.

Fig. 3 Maxim's Pipe of Peace & Inhaler, c. 1910

We are currently pursuing further funding to support our work with schools and develop activities in collaboration with other disciplines.

REFERENCES

1. http://www.medicinethroughtime.org.uk
2. In the letters and novels of Marcel Proust, for example, who suffered from severe asthma and hay fever most of his life.

FROM HAZARD TO HARMONY
THE STORY OF INSTRUMENTS USED IN OESOPHAGECTOMY

ANDREW KNOX

My talk explores the interaction between the development of surgical instruments and the development of surgery. It examines how this has changed over the last 80 years by studying the surgical management of oesophageal carcinoma.

Traditionally, surgical instruments were designed to overcome operative surgical problems, as for example the rigid oesophagoscope and the instruments devised for thoracotomy. However, in the last half century new technologies have developed, including fibre-optics, lasers and ultrasound although none of these were introduced with surgery in mind. Once surgeons and instrument makers discovered these technologies, they were not slow to convert them for surgical application.

Now we have technologies looking for a surgical problem to solve rather than instruments being made in response to a specific surgical requirement. Instead of surgery driving the development of surgical instruments, we find the new technologies providing a stimulus to develop operative surgery.

In the past, surgery for oesophageal carcinoma often proved a hazardous business. Rigid oesophagoscopy carried with it the risk of perforation associated with 50% mortality. The discovery of fibre-optics and the introduction of flexible gastroscopes altered this radically and now thousands of oesophagoscopies are undertaken with very low morbidity and mortality. The first oesophagectomy was performed by Torek in 1913 (fig. 1) and although the operative mortality has diminished gradually, the operation remains hazardous.

So much for the 'Hazard' in my title "From Hazard to Harmony", whereas the 'Harmony' derives from the 'harmonic' scalpel or it's sister, the 'torsional' or Lotus scalpel. This has revolutionised oesophagoscopy by facilitating a minimally invasive or laparoscopic approach, pioneered in Europe by.Richard Berrisford and Saj Wajed at the Royal Devon and Exeter Hospital (1) where postoperative hospitalisation is one week and operative mortality approaching 1% [one death in 92 operations]. The main difficulty in developing this operation was effective haemostasis of the large vessels on the greater curve of the stomach, for diathermy and lasers proved inadequate, clips insecure and ligation too slow. The harmonic and lotus scalpels proved to be the answer.

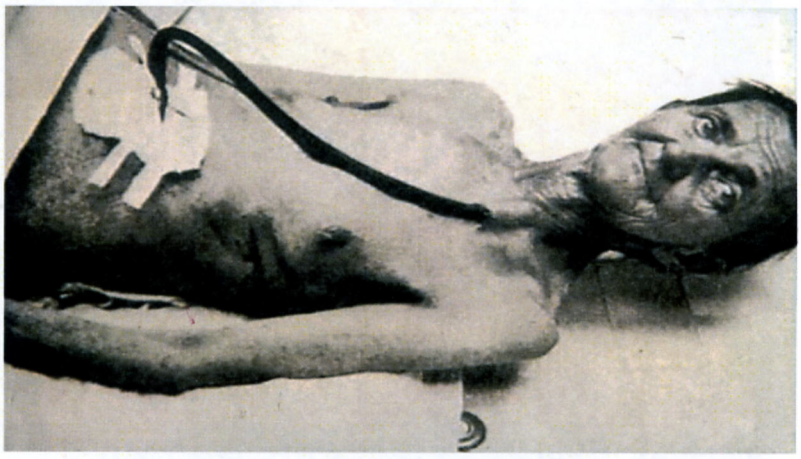


Fig.1. Torek oesophagectomy 1913

The Lotus scalpel was developed in Ashburton, Devon by Mike Young, an engineer who first encountered ultrasound when investigating the effects of vibration on metals for an engineering

thesis. His first commercial venture was a device for cutting bathroom tiles and when discussing this on a television programme, it was seen by an orthopaedic registrar who wondered about its application to surgery. After contacting Young ,the Lotus scalpel was devised (fig. 2).

Fig.2 The Lotus scalpel

This instrument is a good example of the effect of technology outside the surgical field which, when adapted to surgery, has initiated procedures inconceivable 20 years ago.

Reference

1. Berrisford, Wajed, Sanders, Ruckledge, "Development of total minimally invasive oesophagectomy", *Brit J Surg* in press.

MILITARY & NAVAL SURGICAL INSTRUMENT SETS OF THE EARLY NINETEENTH CENTURY

M.K.H. CRUMPLIN

Several formats of surgical instrument sets were required for the injured during and after combat in the 23 year war against the French Republic and Empire (1792-1815). As many campaigns evolved in extremes of climate or in rugged terrain, much of this equipment had to be simple and robust.

Firstly, pocket instruments sets were carried by front line junior surgeons who were placed as near to military action as was reasonably safe in regimental aid posts situated behind rudimentary cover. On line of battle and other ships of His Majesty's navy, patients were close to surgical aid in the cockpit, situated on the orlop deck, below the waterline. Pocket sets included razors, bistouries, dressing forceps, probes and spatulas ; other essentials were water, roller bandages, splints, sponges and one or two drugs. Secondly, pack-saddle portmanteaus containing smaller general and amputation instruments proved convenient for mounted (Staff) officers and cavalry surgeons. Thirdly, in the army, multipurpose cased sets were available for seriously ill or wounded men admitted to brigade or divisional field hospitals, situated in more stable environments behind the lines of engagement, for example in a nearby farm, monastery or church. These instruments were economically packed into stout oak or mahogany felt-lined chests, usually brass-bound, and sometimes protected in leather cases. Sets used by the Royal Navy were sealed for transit in canvas bags, to prevent tampering. Often surgeons purchased their own capital sets costing around £12-6s. and £3-8s. for a pocket set. Although many surgeons had particular instrument preferences, there is evidence of eventual government rulings and, in military (base) hospitals, the apothecary was put in charge of instrument sets. On board ship the loblolly boys and on shore, the regimental surgeon's orderly would sharpen blades on a stone or leather strop. Loose instruments were wrapped in oiled paper. Instrument sets, drugs, splints rollers and other necessaries were stacked into tough wicker panniers, which were lined with cloth and coated with pitch for weather-protection. These were carried in regimental carts or on mules.

Late in the war, regulation of sets is evident.

Fig.1 Monsieur Ferré's presentation set

Hence the Court of Examiners of the London College of Surgeons in January 1813, drew up a comprehensive list of instruments for surgeons in His Majesty's navy and specifically excluded the sharp lenticular and an apparatus for the revival of the drowned. Every year the College appointed the Warden and two Governors to oversee this inspection. Four surviving instrument sets with provenance serve well to illustrate the surgical equipment carried by line or ship's surgeons.

Fig.3 Set abandoned at Waterloo by a unit of the Garde Imperiale

The first is a beautifully bound and inscribed box presented to a Monsieur Ferré, Chirurgien Major to the marine engineers/artificers at Cherbourg, in 1814, presumably for dedicated service to the military port over many years, including the great invasion threat at the beginning of the century (fig. 1). There is a single lift-out tray containing an ebony-handled saw inlaid with a steel motif; other items are missing. In the main compartment, a skull trepan of ornate design is economically engineered to unfold and assemble; alongside ivory handled amputation knives is an interesting fruitwood tube with a mushroom-shaped convex end covered with chamois leather, to act as a vascular compressor, perhaps for hip disarticulation. This set, manufactured by Sirhenry of Paris, highlights the quality of French craftsmanship, presumably well-honed after 22 years at war!

Fig.2 Mr (later Sir) William Beatty's set

The second set is a personal box, designed and made for Mr (later Sir) William Beatty, Nelson's surgeon, on board HMS Victory and taken with him to Trafalgar (fig. 2). Made in the late 18th century by Laundy of London, the set is extremely compact, the upper tray having one handle, fitting four instruments. It also has a rare double-ended

instrument combining an ebony-handled blade and periosteal elevator/scraper. The lower part of the box has two handles – one for two crown trephine heads and the other for a curved amputation blade. Other interesting instruments are a small and simple trephine disc forceps, a tenaculum and a sliding spring vascular forceps. I believe this was a set, which would be reserved for choice patients and procedures!

Thirdly, to highlight the difficulties of capital military surgery is a rare and fascinating box, primarily for amputation. It was abandoned by a unit of Bonaparte's elite Guard, in its flight from the field of Waterloo (fig. 3). The tough brassbound leather trousse is inscribed "Ambulance – Garde Imperiale". Apart from amputation instruments, only two interesting bullet/wound scoops and a mahogany-handled twisting bar for the field tourniquet remain. However the most informative issue about this set is the plethora of capital knives – suggesting that the (government-issued) set was for shared battalion/brigade use. The blades are inscribed "Grangeret Paris".

The last military set belonged to a former important surgeon from Exeter. John Haddy James, an erstwhile mayor of the city and co-founder of the predecessor of the BMA, who began his career as an assistant surgeon to the 2nd Life Guards and served at Waterloo (fig. 4). The fairly standard amputation set carried by him to the battle turned up in Sydney (fig. 5), where a local surgical collector, Dr Kremer, present today in the audience [and now a member of our Society] - bought it, not realising its origin. Until the box was restored, a paper note concealed in its lid remained hidden. Fortunately, the note revealed its previous owner – Dr John Haddy James whose magnificent oil painting is owned by The Royal Devon and Exeter Hospital.

Fig.4 John Haddy James 1788-1869

Fig.5 John Haddy James' amputation set that he used at the Battle of Waterloo

THE RESERVOIR MULTIDOSE PENICILLIN SYRINGE

PETER & JULIE MOHR

This metal penicillin syringe, on display in the Manchester Medical School Museum, is made from a brass tube about 15 cm. long, engraved: 'PENICILLIN SYRINGE CAPACITY 20cc.' (fig.1) Its wooden box notes its military origin – 'R.E.M.E. product' (Royal Electrical and Mechanical Engineers) made for '805 Infantry Troops W/S'. The box bears a cryptic reference, 'Type D.52. MK II' (figure 1.) This robust syringe was intended for use specifically in RAMC field hospitals during D-Day and the invasion of Europe. This example belonged to Professor Mitchell, forming part of a collection he donated to the Museum in 1973.

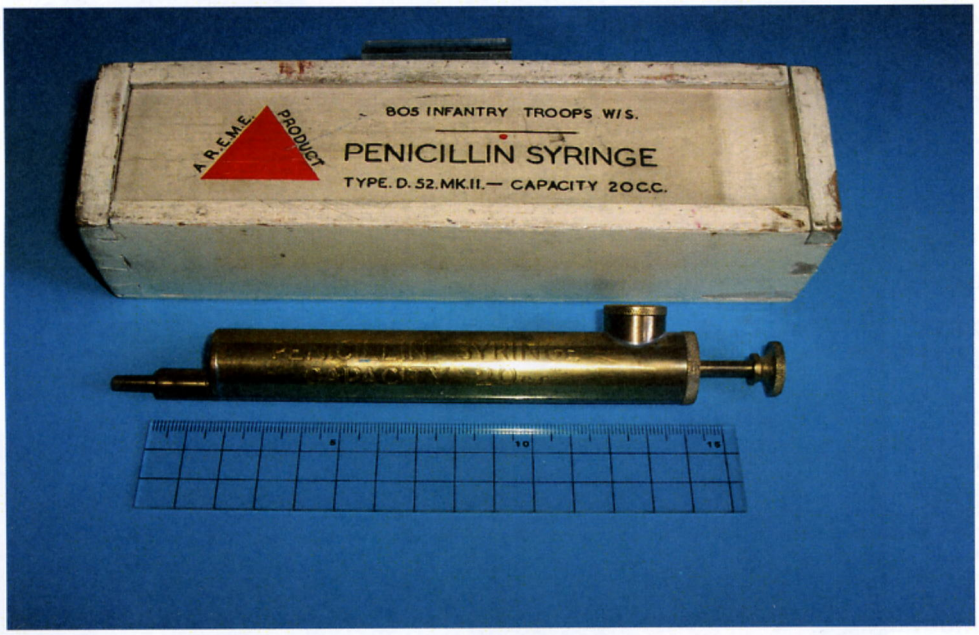


Fig. 1 Penicillin syringe and box

The syringe was designed to hold 20 ml. of penicillin solution, introduced through a 1cm. filling hole, closed by a screw-cap, on the upper part of the tube. A threaded screw mechanism on the spindle of the plunger allowed the dose required for the injection to be set between 1 ml. and 3 ml. When the plunger was pulled back, the preset volume of penicillin (say 1 ml.) passed through a valve in the plunger, ready for injection. When the plunger was depressed, the valve closed and a second valve over the outlet opened for intramuscular injection. When the plunger was drawn back, the valve allowed a further 1 ml. to enter below, ready for the next injection, and so on (fig. 2); the needle was changed for each injection.

George Mitchell OBE (1906-1993) was Professor of Anatomy at Manchester from 1945 to 1973 (fig. 3.) Graduating from Aberdeen in 1929, he trained in surgery (ChM, 1933) and was lecturer in anatomy at Aberdeen University (1). During World War Two, in the RAMC at the Middle East Orthopaedic Centre, Base Transfusion Unit, he investigated the use of proflavine, marfanil and penicillin in treating wound infections (2). In 1943 he was promoted to Lieutenant-Colonel and appointed 'Adviser in Penicillin & Chemotherapy to '21 Army Group'. He returned to England to organise the distribution of penicillin and train army medical staff in its use during the allied invasion of Europe.

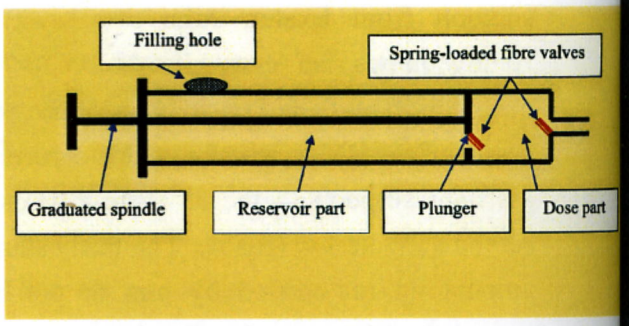


Fig. 2 Syringe in diagrammatic form

and was largely responsible for a *Memorandum on Penicillin Therapy in 21 Army Group* (February 1945,) which described the use of penicillin, and *Penicillin Therapy and Control in 21 Army Group* (May, 1945), which reported the results from field hospitals and included a chapter on "Special penicillin syringes" by Major TJ. Burness, the engineer in charge of the REME Field Workshop (3)

Fig.3 Professor G.A.G. Mitchell

Penicillin and the 21 Army Group

'21 Army Group,' was a huge formation of British and Canadian soldiers assembled by Field Marshal Montgomery for the D-Day invasion (4) The RAMC with their mobile field hospitals played a vital supporting role and penicillin was an important component of their success. 'Prophylactic' penicillin was given to every wounded soldier, regardless of whether the wound was infected or not. Previous experience by RAMC surgeons, especially North Africa, had demonstrated that the early use of anti-bacterial drugs, especially penicillin, greatly reduced wound infection and mortality. The mass production of penicillin, started in 1943 in twenty pharmacological companies across the United States and Canada, to ensure sufficient supplies were available for wounded troops from mid-1944.

To maintain adequate blood levels of penicillin, frequent injections were required. Although intravenous drips were occasionally used for severe systemic infection, these needed constant supervision introducing problems when men were transferred to another hospital. Intra-muscular drips into the buttocks were used in many cases, but those with severe wound infections required frequent 3-hourly intra-muscular injections – for these cases the multi-dose reservoir syringe was designed.

R.E.M.E. and the multi-dose reservoir syringe

Lt-Col Norman Logie (1904-72,) was the RAMC surgeon in charge of General Hospital No. 77, the most forward of the field hospitals in Normandy.' He complained his staff had difficulties giving frequent doses of intramuscular penicillin due to 'Record' glass syringes being smashed in attacks or dropped in the noise and stress of the conflict, rendering their supply critical. Also lighting was often poor or completely absent during blackouts, obscuring the dose marks on syringes, or even whether they were filled or not.

Hence, on 15th July 1944 Logie approached REME engineer, Major Burness, and asked him if he could make a metal reservoir syringe. The first model, called the 'D39,' combined a glass syringe joined to a metal reservoir made from an old telescope tube. The flow was controlled by two valves operated

by old watch springs. 'D39' refers to the fact it was made on the 39th day after D-Day. The D39 was made in the REME Workshop under fire and was not entirely successful. It was superseded by the D52 Mark I. This had an all-metal tube acting as a 20 ml. reservoir and a two-valve mechanism controlling the volume injected (1, 2 or 3 ml), as described above (figure 2.); three dosage settings were etched on the spindle. Some minor improvements (a better grip and larger filling hole) were made with the D52 Mark II model – the model now in the Museum's collection. Other models were made: the D137 had a larger capacity of 26 ml. and was filled through the nozzle, and D187 had six dose settings.

It is not clear if all the models were made from the same material. The D52 model, shown at the HMES meeting, 12th May 2007, is a tube of brass-like material. Major Burness specifically mentions that the metal was tested for its effects on penicillin by the RAMC . The body of the D52 tube shown at the HMES meeting was identified by a member as part of the oilcan of a Bren gun. Clearly the REME engineers used whatever material came to hand under difficult conditions.

These multi-dose reservoir syringes were robust and reliable; as Burness concluded: "they played their part in helping Army doctors to cope with the special problems created by the injection of penicillin under difficult circumstances in the field." Over 50,000 wounded British soldiers were treated with penicillin – 95% survived, partly due to intramuscular penicillin.

REFERENCES

1. Obituary, GAG Mitchell, *BMJ* 10 July, 1993, 121.

2. Mitchell GAG., "Value of penicillin in surgery" *BMJ* 11.Jan 1947.

3. Burness TJ., "Special penicillin syringe", *Penicillin Therapy and Control in 21 Army Group* eds. AE Porritt & GAG Mitchell (Director of Medical Services, 21 Army Group, May 1945), 361-2.

4. Montgomery BL., *Normandy to the Baltic* (London, 1947)

CAPTIONS

Fig.1. Multidose reservoir penicillin syringe, D52 model, 1944.

Fig. 2. Diagram illustrating that when the plunger is pulled up, the upper valve opens to allow a pre-set dose to enter; when the plunger is depressed the upper valve closes and the lower opens to permit injection, repeated as required.

Fig. 3. GAG Mitchell (1906-93).

AN UNUSUAL VETERINARY FLEAM

DERRICK BAXBY

Among 100 veterinary fleams surveyed in a recent Bulletin (2006, No. 16; p. 3-5), one French example of unusual quality was thought worthy of a separate account.

This fleam (105mm closed) was made by Graillot of Paris and dates from 1883-92 [see below]. The most interesting feature is the shield which is in two parts, joined only by the blade pivot at the proximal end, as in a thumb lancet (fig. 1).

Fig.1

However, unlike thumb lancets the horn shields are riveted to a metal lining. The triangular blade protector is forged in one piece with a fixed clasp and is riveted to one of the shield pieces. The components fold into the clasp for secure storage and transport (fig. 2). Only two

Fig.2

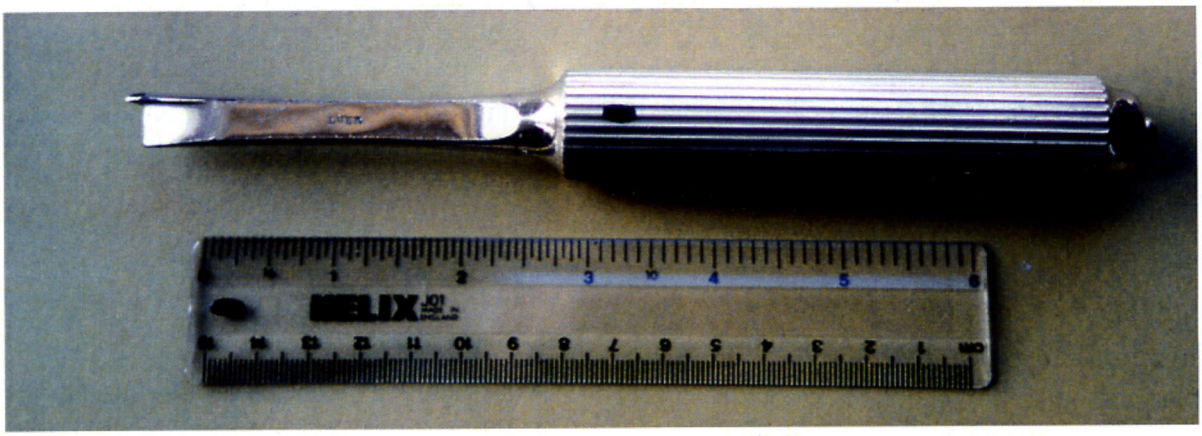
other fleams of this type, including one by Graillot, have been found among over 400 now surveyed.

The quality of craftsmanship is high. The horn, North American bison ('buffalo'), is carefully shaped. Other fleams inspected had brass linings or shields, but brass is not used here. The linings are white metal, probably German silver, as are the rivets attaching the horn pieces to the linings. These rivets are flush on the inside but are domed on the outside as a decorative feature, as is the large pivot. The edges of the linings have decorative milling and the edge of the clasp has decorative beading. Given the quality of the workmanship and the patina on the beading, the clasp/protector and pivot may be silver.

The blade is stamped 'SALLES A PARIS/ GRAILLOT Succr.'. From 1873-1882, Salles ran the veterinary instrument company founded in 1783 by Virtel and worked in the Boulevard St Martin, Paris. He was succeeded by Graillot who listed fleams with an opening shield (etui ouvrant) and with one to three blades, in his 1883 catalogue. That the fleam links Graillot with Salles suggests it was made soon after Graillot took over from Salles. Graillot was succeeded in 1892 by Gasselin who illustrated similar fleams in his 1900 catalogue. Given the value then placed on horses it was perhaps inevitable that wealthy owners would expect their valuable animals to receive the best attention from successful veterinary surgeons using high quality instruments such as the one described here.

Acknowledgement : I thank Alan Humphries, of the Thackray Museum, for kindly providing details of Salles et al. including photocopies of extracts from the Graillot and Gosselin catalogues.

WHAT IS IT? [August 2007]



This instrument has an equal-angled chisel extremity which is guarded along one edge with a probe like section; the handle is hollow. It is nickel-plated and made by Luer of Paris about 1915.

Please phone, email or write your answer to the editor.

WHAT IS IT? [February 2007]

ANSWER

This instrument is an early needle-holder, designed by Spencer-Wells (1818-97) who introduced many instruments apart from his well-known arterial forceps. There is no catch to lock the jaws which are tiny and, hence, the relatively long handles exert powerful leverage when holding needles. Made by Krohne and Sesemann of Manchester Square, London, they were advertised in their catalogue of 1878, although this specimen was probably made in the 1890's. The instrument is nickel-plated, as were all Wells' instruments long before heat sterilisation precipitated this universally about 1892. Almost uniquely, Wells chose nickel-plating to prevent steel corrosion and to improve what he considered operative cleanliness, before any recognition of the significance of bacteria.