



FIG 13—Fibroma of plantar fascia.

excision carries a high recurrence rate, and the histology is difficult to interpret as the nodules are cellular and may be reported as fibrosarcomata when needless amputation and irradiation may ensue.

Conclusion

Less than a century ago the type of surgery described above was considered beneath the dignity of the professional man and was relegated to barbers and bootmakers; indeed, this attitude persists in part today, for many delegate forefoot surgery to the

most junior and inexperienced surgical house officers. When C H Mayo, one of the famous Mayo brothers who founded the Mayo Clinic, read his paper on hallux valgus in 1920,¹³ a colleague was so surprised that he commented that it was strange that so celebrated a surgeon should consider the treatment of bunion an important procedure. The adage that there is no such thing as minor surgery, only minor surgeons, is alas still true.

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Letter from . . . Chicago

Buttering opsonins

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On 24 March 1976 at the height of the primary elections, President Ford wearing his TV-blue shirt and facing the cameras announced his decision to ask Congress for \$135m to vaccinate every American man, woman, and child against swine influenza. "We cannot afford to take a chance with the health of the nation," said the President, explaining the need to stimulate the phagocytes, butter the germs appetisingly with opsonins, and neutralise the deadly ptomaines arising from infected nuciform sacs. But it was reported—in this revisitation of George Bernard Shaw's *Doctor's Dilemma*—that the decision to march against the swine virus had not been made lightly; that there were anxious moments of consultation with Sir Colenso Ridgdon, Sir Patrick Cullen, and Sir Ralph Bloomfield Bonington; that

Mr Cutter Walpole, a surgeon, opposed the measure and advocated wholesale amputations of uvulae and extirpations of immunologically incompetent nuciform sacs; and that Dr Blenkinsop, an impoverished and overworked general practitioner, insisted that a pound of ripe greengages taken every day half an hour before lunch would be just as good and far less expensive.

Reasons for vaccination

Yet the events precipitating the President's decision were suspicious and alarming. A serious outbreak of influenza, the third worst in 50 years, had raged during the winter months, and over 20 000 people had died from respiratory illness. The virus had found its usual fruitful soil among the nation's military camps, and at Fort Dix, New Jersey, some half of the recruits had come down with upper respiratory complaints. Among these recruits was young private David Lewis, whose illness at first had seemed to be an ordinary cold. Several days later, however, his malaise increasing, he wrote to his fiancée

that he felt as if he had been hit by a truck. He insisted, nevertheless, on going on an 8-km march in the snow, and, though he coughed heavily during this exercise, he refused to return to camp. On the way back, however, his breathing became laboured, he began to act strangely, collapsed unconscious, and died before he could be taken to hospital. The next day the necropsy findings showed that the lungs were filled with a thin, frothy, bloody fluid, with little or no consolidation—an appearance reminiscent of the descriptions from the 1918 pandemic. Several days later virologists isolated from the victim's trachea, not the prevailing A/Victoria/75 strain, but the swine influenza virus.

The virus, soon to become the object of intense publicity, became officially known as A/New Jersey/76. Yet even the name was not to escape controversy. Tourist officials thought that New Jersey had problems enough without having a flu named after it and complained about the gratuitous insult to their State, particularly since "no matter how you slice the bacon, swine flu is swine flu." Hog farmers, on the other hand, afraid that people would avoid contact with pigs and stop eating pork, objected to what they saw as yet another slam at that much maligned animal. And the livestock board began a campaign to promote the use of the official New Jersey name in lieu of the offensive swine designation.

But swine it was to be. Soon the virus was isolated from the inoculates of four other recruits; another 273 had positive results from serological tests; and it was surmised by extrapolation that some 500 had been infected, either by a mutant swine virus or by genetic recombination with the Victoria strain. And, since the swine virus had been circumstantially associated with the Spanish flu (ever since the memorable 30 September 1918 when the prize hogs at the Iowa State Fair in Cedar Rapids, Iowa, went down with symptoms resembling human influenza), its appearance in man raised the possibility that another pandemic was at hand.

Yet, despite such disturbing intelligence, the President's decision was met with scepticism. Noting that the opsonic index of the Republican party was in a decidedly negative phase, political commentators suspected an election gimmick. Most countries, it was pointed out, had not followed suit. Moreover, there may be no epidemic, and, anyway, the virus may not be virulent. Furthermore, since most deaths in 1918 were from secondary infection, might it not be just as well to manufacture the vaccine, stockpile it, and use it in conjunction with amantadine and antibiotics should an epidemic occur?

The *New York Times* thought that the President's advisers had panicked. The World Health Organisation was at first unconvinced. Ralph Nader's group criticised the suddenness of the decision; and others predicted the programme would cost five times more than had been originally projected, with the costs passed on to insolvent State and local authorities. There were also complaints that emphasis on the flu would detract from other immunisation needs; that a measles epidemic was receiving scant attention; and that the population was being left exposed to a possible A/Victoria flu epidemic. And what would happen, it was asked, when the immunity conferred by the present vaccination wore off?

There were some who predicted that the vaccine would only be 20% effective. There were others who worried about its purity, its long-term effects, and the possibility that 30 million people might have reactions. Objections were raised to the use of prisoners in the safety tests, in apparent violation of federal rules. The government's precipitousness was contrasted with its notorious caution in releasing new drugs. But, while many remained in favour of Dr Blenkinsop's regimen, a considerable number thought that the President had made the right decision. The \$135m programme was speedily approved by Congress. The press and politicians, for the most part, acquiesced. The Air Force surgeon warned that a deadly flu epidemic among pilots and missile crewmen would leave the country at the mercy of its enemies. The American Medical Association pledged full support, and while scientists thought that much will be

learnt from implementing the programme, sceptics commented that it won't be the first \$135m wasted by the government.

So the summer was spent in preparing the vaccine; and there were some false starts such as the printing of millions of inadequate consent forms and the manufacturing of six million doses of the wrong kind of vaccine. July found the administration, Congress, manufacturers, and insurance companies bogged down in an impasse over possible malpractice claims, with manufacturers threatening to suspend production; with Congress refusing to pass further legislation and urging the administration to persuade the insurance companies to underwrite the programme; with the press suspecting the insurance carriers of trying to set a precedent for playing a part in a future national health scheme; and with the administration vowing to find a way to carry on no matter what. It was remarked that an epidemic of confusion was stalling the programme. Then there were rumours about a swine-flu epidemic in Australia and New Guinea; then Congress wanted to know why two mysterious virus hunters had been sent to the Far East; and again it was said that the flu pandemic was a "non-threat," and that the government, though deeply committed to the programme, would be well advised to drop it.

Legionnaires' disease

The debate, however, changed dramatically in August with the explosive outbreak of a mysterious illness among the participants at the American Legion convention in Philadelphia. Headache, chills and fever, chest pains, prostration, shortness of breath, and pulmonary congestion were the main symptoms of what soon became known as legionnaires' disease. Within a few weeks, 165 people were admitted to hospital; 28 died—some with complete red hepatisation of the lungs—and clearly the spectre of the swine flu hovered over the entire incident. There was an intensive investigation; specimens of blood, urine, and tissue were rushed to various laboratories; but the scientists remained deeply perplexed. After a few days they announced that they had excluded, firstly bacteria and then most viruses, including swine flu, Lassa fever, and green-monkey fever. Other possibilities considered were poisons, herbicides, ethylene glycol, nickel carbonyl, paraquat, contamination of drinking water or air-conditioners, slow viruses, and foul play.

A mad-chemist murder theory persisted, and several months later a House subcommittee staff report criticised the investigative efforts as a fiasco that spoiled blind leads and followed blind reports. The cause of legionnaires' disease may never be known. But at the time the impact was dramatic, with officials reassuringly declaring that there was no need to panic, but with the press calling on Congress to resolve urgently the impasse over the flu vaccine.

A medical Bay of Pigs

So at last Congress stirred into action. On 10 August, on the eve of the Republican national convention, legislation was rushed through both Houses under which the government could be sued for problems arising from the vaccination. The manufacturers were to be absolved from liability but were also to make no profit, a consent form was to be signed before each inoculation, and the federal government could in its turn sue providers for outright negligence. Doctors, incidentally, were to be immune from suit only if they did not charge for administering the vaccine. At any rate, the press and public were satisfied, though critics questioned the government's failure to anticipate this problem earlier. Moreover, some people wondered why the manufacturers and insurance companies had elected to make an issue on this point. Some thought the government had been taken for a ride; others that it was an undesirable

precedent. But, with the crisis solved, production was resumed, hundreds of people were trained to use the jet-injections, and the City of Chicago prepared plans to use an army of precinct captains and patronage workers to ring at every door and solicit not votes but vaccinations.

It appeared, however, in early September that enough vaccine might not be available, unless a "production miracle" occurred, and on 3 September the President called in his advisers to express dissatisfaction with the slow progress of his programme. Doubts also re-emerged whether or not the vaccination was still necessary; and with still no sign of swine flu anywhere in the world, Canada curtailed its vaccination effort, and Dr Sabin also announced his opposition to the programme. Confusion also reigned as to where and when to get the vaccine—and some newspapers suggested that America's most ambitious but most troubled public health project was, in fact, a medical Bay of Pigs.

Finally, on 1 October the campaign began with the vaccination of those at high risk, with old people queuing up in their wheelchairs, and with public officials and the President himself being vaccinated in the full glare of the TV cameras. All went well for two weeks. On 12 October, however, the swine flu again made headlines: at least 35 persons were reported to have died within hours of taking the vaccine—and even the sudden death of a famous gangleader was attributed (tongue in cheek) to murder by flu inoculation. Fifteen states immediately suspended their programmes. Within a few days, however, it

became clear that the deaths were unrelated to the vaccine, occurring mainly in septuagenarians and octogenarians, and in numbers well within the expected mortality rate for that age group. The programme was again resumed, with the end of October marking the beginning of the next phase—the inoculation of healthy people aged 18 to 65 with the monovalent vaccine.

And so we come to the last act of the "vaccination dilemma." George Bernard Shaw, who regarded immunology as a dangerous superstition, might have had his hero die from hypersensitivity to eggs, with his lungs turning as gangrenous as poor Jane Marsh's arm, and with his pretty wife suing for \$100m and making a fortune from a best seller anti-doctor book. But in reality nothing quite so dramatic happened, at first. The vaccination programme continued to limp along, with its uncertainties and controversies, somewhat eclipsed by the excitement of the presidential election and the speculations of the inevitable transition period, and with the earlier adverse publicity clearly acting as a strong deterrent for many people. It is estimated that by December some 35 million people received the vaccine. Then came the final blow, an announcement that 51 persons who had been vaccinated had Guillain-Barré syndrome and that five had died. Once more the programme was stopped, and, although a definite causal relationship has not yet been established, it appears that vaccination may not be resumed and that perhaps greengages would have been better in the first place.

A woman who has had two normal children and is contemplating a third pregnancy has just learnt that some years ago her mother-in-law had a child with spina bifida (probably with associated meningomyelocele) who did not survive. What is the risk of her having an affected child?

In a population such as London's, where the birth frequency of anencephaly and spina bifida is about 1 in 300, the risks to brothers, sisters, and children of index patients appears to be about 1 in 25; the risk to half-brothers and sisters, nephews, and nieces about 1 in 100; and the risk to first cousins about 1 in 200. Accordingly the risk to this woman's children is about 1%, with the risk about equally divided between anencephaly and spina bifida cystica.

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Most people attract insects. This summer I noticed that a child (aged 9) seemed to repel insects, an effect that even protected an adult from insects when he picked her up. Is there any explanation for this unusual phenomenon?

Some children undoubtedly repel insects more than other children. Skinner *et al*¹ showed that human skin surface lipid contains an unsaturated free fatty acid component repellent to female *Aedes aegypti* mosquitos. This, or something similar, probably explains this interesting observation. The child could earn an honest if frugal living by being hired out to Scottish walkers and campers. Biochemical (for instance, gas-liquid chromatography) examination of washings from this child's skin would also interest dermatologists. By contrast, attractiveness to mosquitos and perhaps other insects is enhanced by increased sweating, whether general (such as after sauna baths or exercise) or localised after pilocarpine iontophoresis or injections of methacholine.²

¹ Skinner, W A, *et al*, *Experientia*, 1970, **26**, 728.
² Khan, A A, *et al*, *Nature*, 1969, **223**, 859.

What does "blighted fetus" mean and what causes it?

The term more generally used is that of blighted ovum, in which apparently normal development of the embryo and membranes,

including the trophoblast, continues for a time, and then the embryo dies leaving the membranes alive, at least for a while. This process has been known for a long time by embryologists and those who have studied abortion. In a few cases of early complete abortion the gestation sac is whole and enclosed on delivery, yet contains no recognisable embryo. It must have died and been resorbed. The causes are not always obvious, though they may be genetic or environmental. An interesting one in the second category is that of twisted umbilical cord. If there is much fluid in the early gestation sac probably the embryo may twist round and cut off its own blood supply. Examples of this may be seen occasionally. Blighted ovum may now be diagnosed before the products of conception have been expelled. Sonar, as shown by Donald,¹ can demonstrate the empty gestation sac. It is he who has largely recovered the term blighted ovum and brought it into clinical obstetrics and gynaecology. The diagnosis is valuable in showing the futility of continued bedrest in a threatened abortion, and it may indicate the necessity for genetic investigations.

¹ Donald, I, *Practical Obstetric Problems*. London, Lloyd-Luke, 1969.

A man aged 43 flies three times a year to the Persian Gulf. If the flight is broken by a landing en route (generally for one hour and often without disembarking from the plane) then on the second ascent he suffers for 10-15 minutes from a sensation that the inside of the plane is rotating. Can anything be done to prevent this or is further investigation advised?

The description of the symptoms in this case suggest that he suffers from alternobaric vertigo—probably related to mild dysfunction of the eustachian tube and due to the expansion of gas in the middle ear on ascent. A full examination of the ears, nose, and throat should be made to exclude any condition likely to produce some degree of mucosal oedema in the eustachian tube—for instance, chronic rhinitis, low-grade sinusitis, septal deformity, etc. If any such lesion is found its treatment would be helpful. Prochlorperazine maleate (Stemetil), 5 mg, taken shortly after landing at the end of the first stage of the journey will reduce the sensation of vertigo on re-ascent. A long-acting antihistaminic such as diphenylpyraline hydrochloride (Histryl Spansule), 5 mg, taken at the start of the flight may help by decongesting the nasal and tubal mucosa, and secondarily by acting as a labyrinthine sedative. Simple nasal inhalers, of a type not containing amphetamine sulphate, may be used also before re-ascent.