ACTION STATIONS IN AUSTRIA

BY

N. H. MOYNIHAN, M.A., M.B., B.Chir.

Clinical Assistant, Chest Department, St. Thomas's Hospital, London

Six months ago, when the magnitude of the refugee problems in Austria was realized in this country, many doctors offered their aid to the British Red Cross in the hope of being able to assist the overburdened Austrian Medical Services in the task of caring for the thousands of refugees who poured over the Austro-Hungarian frontier. Owing to the somewhat confused state of affairs in Austria in those early days and to the slow communication of accurate news to us here, many of these volunteers were not then accepted by the British Red Cross, although some were able to render valuable service to the refugees in this country at a later date.

A few doctors who were, however, directly in touch with voluntary workers in Austria in the middle of November were able to go out there on their own initiative and take part in casualty work on the border. The experience of one of these who has just completed six months' work in South-east Austria and Yugoslavia might be of some general interest.

Arrival of a Medical Team

Like many others, the members of a small team offered their services to the British Red Cross in London, having heard from a worker in Austria that medical aid was urgently needed. A most sympathetic reception was accorded to them by the Red Cross medical adviser, but his information indicated that no medical aid was needed in Austria at that time. The strength of the appeal from Vienna, however, was so great that the team decided to proceed there by road with stores of food, clothes, and medical supplies. On arrival three days later it was met by the correspondent in question with a rasping indictment of the time it had taken to travel out from England. It appeared that, in the south-east corner of Austria, where refugees were crossing the frontier at the rate of 800 to 1,000 nightly, medical assistance was indeed urgently required. It was decided that the services of the team should first be placed at the disposal of the Red Cross in Vienna, but the British Headquarters there did not feel that these could be utilized within its framework.

The team then proceeded with all haste to Gussing, in South Burgenland, some 150 kilometres from Vienna. There, in a Franciscan monastery, a loose formation of voluntary workers, consisting of five men and four girls, all British, two Swiss girls, and a Dutchman, had come together and were caring for some 500 to 800 refugees every night. The bulk of these refugees were receiving no medical attention: the serious and urgent cases were taken to the small local hospital, where the two local doctors were assisting the two hospital consultants in working around the clock with magnificent devotion. The limited number of beds in the hospital had long since been filled and the services overflowed into the corridors and other rooms. Surgeons and physicians alike were tired and overworked, and they welcomed the British team with enthusiasm and kindness. No word of praise can be too high for the Primarius and his staff, who co-operated in every possible way at all times.

Working Round the Clock

In the monastery itself the volunteer team of men and girls were also working around the clock, with the five Franciscan monks, to feed, house, and clothe the hundreds of Hungarian refugees who were constantly being brought

in from the border by Austrian post-buses. These people crossed the border, mainly by night, in the villages some 10 to 20 kilometres distant, and were then brought to the staging post in the monastery. To the south-east of Gussing there is a small salient of land shaped like the head of a spear, and from there the border lies on three sides of you. It is clearly marked with flags, but later it was not wise to rely on the flags, since the Russians and Hungarian Secret Police put up false Austrian flags to trap the refugees trying to cross the border. In this salient the organization later set up field kitchens in the border villages with housing accommodation and feeding facilities. There are now in the salient some half-dozen such kitchens supplied from Gussing, and the organization has been formed into a company known as "Aid to Hungary from Britain," which subsidizes and supplies the needs of the workers and refugees.

The monastery refectory seated at capacity only 60 refugees, and each meal required about 10 sittings. Preparation of food, cutting of bread and *Wurst*, and washing-up became a monotonous and wearisome task after several days of 20 working hours per person. A constant night shift was essential, as the arrival of cold, wet, and hungry refugees was absolutely unscheduled and the workers were not sufficient in numbers to work in regular shifts. The refugees lived and slept in the classrooms of the monastery, packed on straw palliasses on the floor, and often they overflowed into the corridors when the flow was heavy, making the transit of new arrivals very difficult among the sleeping forms. The first sight of these men, women, and children lying in the sleep of utter exhaustion was a moving one, and soon became commonplace. Some of them had spent days hiding in frozen fields and in haystacks or had walked scores of miles in open country at night. Some were old people, some were children; but most of them were young men in their early twenties, some with wounds still unhealed after the fighting in Budapest.

Precautionary Measures

The epidemic potential of such a situation was obviously very high, and the first action of the team was to organize the sanitary arrangements of the camp in conjunction with the local and very friendly medical officer of health. Disinfectant precautions were enforced, any suspicious cases being immediately isolated, and scrupulous cleanliness was ensured, especially with eating and drinking utensils. In this connexion it was soon quite apparent that the Hungarians themselves were extremely co-operative, and their enthusiasm for personal and communal cleanliness was of a high order.

Surgeries were then set up by the team—after the morning meal at 8 a.m. and after the midday meal, during which an announcement was made by the interpreter. For the first week these surgeries averaged some 80 patients per session and seemed to form a reasonable parallel to a National Health practitioner's surgery in any large English town. However, with the increase in the number of urgent night calls to the border villages once the facilities became known, it soon became clear that a system of medical night rounds to these villages must be organized, and thereafter a round between four and five o'clock in the morning was carried out to give succour to refugees who had just crossed the frontier. The weather at that time was cold and damp, and many of the fugitives had to swim across the rivers and canals which parallel the border in this region. Later the weather became extremely cold, with temperatures under 20 degrees below zero, and this was followed by a period of deep snow, which probably accounted to some extent for a falling off in the numbers of refugees, since walking was extremely difficult and all the roads were blocked for some days.

Medical Problems

The medical problems encountered both in the surgeries and in the field were remarkably varied and most interesting, and the experience was extremely valuable not only to

the student contingent but also to the doctors themselves. Language difficulties at first seemed to loom large, but it was soon found that each contingent usually contained a small number of interpreters who spoke either English or German, and, as an added help, often these were themselves doctors. There was at one time a trio of consultants to a Budapest teaching hospital, all unfortunately in specialist branches which could not be readily utilized in a surgery set-up. As interpreters, however, they formed an amusing choir which made all things clear. When all other help failed, moreover, the list of medical phrases in Hungarian and English, compiled and distributed by the Women's Voluntary Services in England, proved moderately useful. Such phrases as, "The lavatory is next door" did not seem to find full use and an agitated pantomime might fail to register, whereas the patient's pointing to the Hungarian phrase, "I am constipated," often made things clear.

The backbone of every practitioner's surgery was more prominent than ever in the Kloster: coughs, colds, sore throats, backaches, bunions—all these were legion. A rectal surgeon could have run a respectable clinic on the haemorrhoidal cases: the team concluded that these were caused mainly by the great distances which the refugees had often walked—40–60 kilometres was a good average—and to the fact that constipation was frequent owing to the practical difficulties of maintaining daily regular bowel habits over the period of perhaps a week or more. At one time suppositories were at a premium and made an urgent demand on the supply list to England. The bronchitic cases in the surgeries not infrequently developed into cases of pneumonia and had to be removed to hospital, but when acute shortage of beds arose these patients had to be nursed in the monastery, and this necessitated a twice-daily sick-round in an improvised sick-bay, the beds of which consisted of double-thickness straw mattresses laid on the floor.

Obstetrics and gynaecology were not neglected. Eighteen miscarriages occurred, often brought about by extreme hardship on the long journey from Budapest to the border. Some of these women had to be hospitalized: others refused to be separated from their families and required constant watching in the monastery. Four emergency births took place, one almost at term, the remainder some weeks prematurely; and one unfortunate child owes his name of Kloster to the stone walls among which he first saw the light of day. The gynaecological cases were again mainly due to aggravation of semi-permanent conditions by the long walking, often made more onerous by the need to carry small children or luggage. There was a sprinkling of vaginal infections, and, quite unfathomably under the circumstances, an occasional shy request for contraceptive facilities, which, needless to say, were not, and could not have been, granted.

A number of fresh gunshot wounds were seen at the border, and the majority of these casualties were taken to the hospital in the team's transport. Twenty-three cases with old gunshot wounds, mostly received in the fighting in Budapest and treated a few weeks before, were dressed, and the recipients, some of them women, treated with antibiotics. These included a man who had had a bullet extracted from his skull—he was put on a Swiss Red Cross train—and a boy of 15 who had been shot in the chest. The bullet had entered just lateral to the sternum at about the level of the second right costal cartilage and had emerged in the right axilla. He was getting severe pain in the right forearm and hand; fibrosis around the medial cord of the brachial plexus was diagnosed, and he was sent to the professor of neurology in Vienna. Two cases of tetanus were encountered, one patient dying later. Most of those wounded had received antitetanus serum and three had had serum reactions, one fairly severe. Eight diabetics applied for insulin and one diabetic coma was encountered.

Undoubtedly the prize exhibits of the surgeries were the blisters. It is difficult to imagine to what extent human beings can misuse their feet and still continue to walk. Some of the blisters which the members of the team saw resolved that particular difficulty for them. Blisters involv-

ing the whole of the heel and reaching down to the bone, often infected, were a commonplace in those early days: in the latter months, when the urgent necessity to flee from their homeland had died, the refugees' blisters became less severe. Frostbite of the toes was also extremely common, and some cases required surgical interference and amputation. Most, however, responded to long-term treatment, and calls upon the clothing expert for suitable footwear for these patients sorely tried his ingenuity. In March there were still eight of these patients in the hospital; they had been there for many weeks, but all were walking again.

Hospital Cases

On the surgical side, five cases of acute appendicitis were admitted to hospital, all making a good recovery. There were two cases of acute cholecystitis, and one of gall-stone colic which caused many people a very restless night. Eighteen persons were treated for post-operative complications of laparotomies carried out some weeks before, four requiring hospital admission, two of them being treated surgically.

Medical cases included chronic gastric and duodenal ulcers, numerous cases of valvular heart disease—some on digitalis—three severe cases of hypertension, and an interesting case of multiple sclerosis—a crippled woman. There were a number of medical emergencies, including four "coronaries," one severe asthmatic, and one patient with miliary tuberculosis, who later died. There were also a number of cases which were thought to require radiography because of a history of haemoptysis, cough, loss of weight, or physical signs. Of these 18 were found to have tuberculous lesions. One case of carcinoma of the bronchus was diagnosed and later confirmed. As Posner (1957) suggested, the response of these refugees to a suggestion of a chest radiograph was excellent; no objections were ever raised. A mobile x-ray unit would have been invaluable, and Aid to Hungary from Britain has sent two such units to Yugoslavia for use in the Hungarian refugee camps there.

The history of tuberculosis found in 10% of the refugees examined in England (Eldon, 1957) was confirmed by our investigations, and the pleas put forward by Smith and Mann for follow-up mass x-ray examinations of all the refugees in this country is stressed (Smith, 1957; Mann, 1957). Incidentally, a man seen at one of the border field kitchens by Dr. Mary Howson had large tuberculous glands of the neck which he had himself opened with a penknife on the way to the border. There seemed to have been a marked lack of sterile precautions in that operative procedure.

Conclusion

On the whole, the findings of Broad (1956), that the health of the refugees seen on the journey to England seemed generally to be very good, were borne out by our findings, although it should be remembered that many cases of illness had been weeded out before he saw them. The children were bonny and well nourished, and were extremely lovable and friendly. Physique was excellent in the young adults examined, and, seen at that stage when spirits were high in spite of exhaustion, morale was very good. At a later stage, when the channels of refugee-flow became clogged in the back-area camps and refugees stayed longer in the monastery, depression became more marked. This was accentuated when, in bitterly cold weather, refugees had to stay for periods of up to a week at the border kitchens, where conditions were of necessity very primitive and where it was very difficult to keep the refugees occupied.

Nearly 25,000 refugees passed through Gussing, and for the four doctors and three medical students who assisted the organization at Gussing over the period the experience of attending and helping the Hungarian people was undoubtedly valuable and exhilarating, although for those who came out as replacements in the later period the work was less exciting and more humdrum than during the chaos of the first few weeks.

It is desired to thank sincerely those medical firms and organizations in England who supplied dressings and drugs and all manner of appliances, from surgical instruments to Elsan lavatories, and did so spontaneously and generously. Their help will long be remembered by the medical workers, the Austrians, and, it is hoped, by the Hungarians themselves.

REFERENCES

- Broad, C. P. (1956). *British Medical Journal*, 2, 1359.
 Eldon, W. (1957). *Ibid.*, 1, 167.
 Mann, B. (1957). *Ibid.*, 1, 44.
 Posner, E. (1957). *Ibid.*, 1, 704.
 Smith, D. (1957). *Ibid.*, 1, 461.

BRITISH EMPIRE CANCER CAMPAIGN THIRTY-FOURTH ANNUAL REPORT

For any but the cancer research worker the British Empire Cancer Campaign's latest report is stiff reading. Even the introductory summary assumes much specialized knowledge, and the arrangement of the main text, by place of work or under the name of the individual worker rather than by subject, makes it hard to get a clear picture of what is happening in this most important field. The lack of a subject index intensifies the difficulty. But what does emerge quite clearly from the Campaign's report is the remarkable breadth of the present attack on cancer. The assault troops include among their number chemists, physicists, virologists, immunologists, radiobiologists, crystallographers, microscopists, and cytochemists, as well as clinicians, radiotherapists, and those concerned with environmental hygiene. And there are many others. Their approaches are as varied as their trainings. There can be no doubt of the formidable array of talent now being deployed in research on cancer, or of the Campaign's key role in sponsoring, co-ordinating, and financing this work.

The Report and Finances

The thirty-fourth annual report covers the year 1956. It is a massive volume of 31 introductory pages and 559 pages of text. It opens with the membership of the Campaign's standing committees and subcommittees and a summary of the work reported; then come research reports from 18 British centres and five area councils or branches in Britain, an account by Professor G. F. Marrian, F.R.S., of the Campaign's conference on "Oestrogen Methodology" last year, reports of research in Uganda, Canada, New Zealand, and Australia, and individual reports from the Campaign's 45 grantees and 17 fellows. This forms the bulk of the volume (pp. 1-532); and each report, besides recording research findings, lists the staff concerned and their publications and gives a bibliography of other work cited. The annual report concludes with a statement of the Campaign's financial position and a name index of the research workers.

The Campaign's income last year was £563,953 and its expenditure £558,694. A particularly heartening feature is that the income from donations, collections, and legacies showed another large rise during the year to reach the figure of £529,102. Over the last two years income from these sources has increased by some 40%. Of the expenditure, £492,388—88% of the total expenditure—was spent on the "main objects of the Campaign."

Summary of Research

Necessarily, states the report, the Campaign's research programme is still in a phase of expansion, and this will continue until greater knowledge permits a more selective approach or a key discovery revolutionizes the situation. In the meantime much work is proceeding on the mechanism of carcinogenesis and on such basic problems as protein synthesis and the enzymatic regulation of normal growth. One feature of recent cancer research stressed in the report is the great revival of interest in tumour immunology.

Studies in carcinogenesis include work at the Middlesex Hospital on two of the simplest chemical carcinogens at

present known, β -propiolactone ($\text{OCH}_2\text{CH}_2\text{CO}$) and ethyleneimine ($(\text{CH}_2)_2\text{NH}$), in the hope that they may throw light on the action of the complex polycyclic carcinogens. At the Strangeways Laboratory, Cambridge, tissue cultures are being used to investigate the effect of carcinogens on the synthesis of deoxyribonucleic acid. The carcinogenic properties of mineral oils—"a matter of some concern"—are being further investigated by workers in Birmingham and Exeter. Another investigation at Birmingham has shown that large doses of oral copper give some protection against chemically induced hepatomas in rats; copper has also been found by a histochemical technique in the livers of three human cases of hepatolenticular degeneration.

Cancer of the Lung

Naturally there has been much research on cancer of the lung, atmospheric pollution, and smoking. Work at St. Bartholomew's Hospital on the cyclic hydrocarbons in tobacco suggests that these are almost entirely absent from the fresh leaf and that the most probable source of such compounds as anthracene, pyrene, and 3:4-benzpyrene is in the drying and curing. When a cigarette is smoked two processes appear to occur simultaneously—combustion of the contaminating hydrocarbons and their production *de novo* from the tobacco. The amount of these hydrocarbons in the tobacco before smoking is greatest in the case of cigars; in the products of smoking it is greatest in the case of pipes. But "probably the most important factor here," states the report, is the temperature of combustion, which is lowest in pipes, higher in cigars, and highest in cigarettes. Arsenic has also been studied. The arsenic content of the lungs of 23 persons without obvious signs of pulmonary disease at necropsy averaged 48 μg . (As_2O_3) per 100 g., but the amount of arsenic in the lungs of men and women respectively was in the ratio of 64:28. Tobacco grown in the East ("Turkish") contains very little arsenic, but new analyses of "one of the most popular brands (of cigarette) smoked in Britain" show a fall in arsenic content from 25 and 100 μg . in 1948-9 to between 1 and 2 μg . last year. The change is thought to be due to the "gradual abandonment of arsenical insecticidal sprays by the growers in the U.S.A." Most of the attempts to produce tumours in animals with tobacco tars have failed, but the intrapulmonary inoculation of eight rats with tars from a cartridge-type filter was followed in two cases by the development of tumours (a sarcoma and an oat-cell cancer). This lead is being followed up. Cigarette smoke contains large amounts of carbon monoxide (about 4-5 cu. cm. per cigarette), and this gas is being studied at the Institute of Cancer Research (London) in view of the possible role of anoxia in tumour induction. Other work on lung cancer has of course included much chemical and epidemiological research on atmospheric pollution.

Therapy

The principal lines of investigation here have been on the hormonal control of cancer, the chemotherapy of cancer, radiotherapy, and the role of chemicals and oxygen as "radio-sensitizers." At Mount Vernon Hospital the adjuvant effect of oxygen on radiotherapy is being studied both experimentally and clinically. Selected patients are receiving x-ray treatment while breathing oxygen at a pressure of one atmosphere. This follows encouraging reports by I. Churchill Davidson on patients treated at an oxygen pressure of three atmospheres. It is now firmly established experimentally, states the report from Mount Vernon, that "radiosensitivity is strongly dependent upon the availability of oxygen at the time of irradiation." At Cambridge, Professor J. S. Mitchell, F.R.S., is reaching, after 10 years, the end of the first stage of his clinical trial of chemical radiosensitizers. "Synkavit," a synthetic water-soluble vitamin K analogue, given intravenously, has been found to have a "definite small but practically useful effect" as a radiosensitizer in inoperable cancer of the bronchus. It is now being tried in combination with oxygen.