



From left to right: Professor Tsuji, Chairman of the Afternoon Session, Dr. Guttmann, President of the Society, and Professor Amako, President of the Second 1964 Scientific Meeting.

to work. Although there is a growing tendency to restoration from the state of collapse caused by the war, year by year, we have a lot of difficult problems. Moreover, we have not yet come to conclusions on the indications for operations for spinal cord injury and whether we should do early spinal fusion of vertebral fractures. I hope that these problems will be cleared up through this meeting. With regard to rehabilitation, this is not satisfactory in Japan because of shortage of specialists and facilities. Speaking from the paraplegic's point of view, many of them are now spending days in hospital in vain, because of poor facilities for living after discharge from hospital and lack of desire to return to work.

To improve this situation, we should concentrate on advancement of medicine and we should prepare more carefully for receiving them back into society on discharge from hospital. At a time when we have so many difficult problems, it is well worth while holding this Second Scientific Meeting in Tokyo. Taking this opportunity, we might expect to make further great progress in the medical care of these patients and in improving facilities for them.

It is a great pleasure for me to have this wonderful meeting, together with many distinguished colleagues from the whole world. As we come to know each other by this meeting, our hopes and aspirations shall also be joined together.

Thank you all for coming and for your kind attention!

PRESIDENTIAL ADDRESS

By L. GUTTMANN

*National Spinal Injuries Centre, Stoke Mandeville Hospital,
Aylesbury, Bucks, Great Britain*

FIRST of all, I should like to thank Professor Amako for his introductory address and also, in my capacity as President of the International Medical Society of

Paraplegia, to thank him and his colleagues most warmly for organising the Second Scientific Meeting of our Society this year.

The presence of such a great number of participants at this meeting today shows the growing interest of members of the medical profession in the complex problem of spinal cord afflictions of any kind, but in particular of traumatic lesions, and this is also evidenced by the great number of papers submitted to this Meeting. This is, of course, not surprising, as the problem of paraplegia and tetraplegia is growing in magnitude as a result of the increase of traffic, industrial and sports accidents on the one hand and the increasing survival rate of paraplegics as well as tetraplegics on the other. There cannot be any doubt that, in the next 10 or at the latest 20 years, this problem will become one of the major problems of disablement in many countries, and there is great need to provide proper facilities for the whole treatment and rehabilitation of these unfortunate people.

I have observed on my journeys throughout many countries that the problem of paraplegia and tetraplegia is becoming more and more alarming, especially as far as the domestic and industrial resettlement of the more severely disabled people is concerned. In most countries it is extremely difficult for the relatives to care for these people, and on the other hand the provisions made by Governments and society in general for the after-care, including institutional care, is either non-existent or very unsatisfactory. Therefore, everyone who belongs to this Society should do his utmost in his own country to make his Government and society as a whole conscious of the need to do something constructive now. Professor Amako has mentioned the difficulties which prevail in this respect in Japan, but I can assure him, although this should by no means be considered as consolation, that these difficulties exist in many other countries. Let us hope that the International Stoke Mandeville Games for the Paralysed, now being held in the splendid Tokyo Olympic Village, will be an eye-opener to the public in Japan and an inspiration to the Government and society as a whole to improve facilities for the rehabilitation of their paralysed fellow-men.

The advances made in the last 20 years in the subject of spinal paraplegia are no doubt due to the congregation of paraplegics and tetraplegics in specialised units and the development of a specialised service for the management of these patients. This has given opportunity to attack the many aspects involved in paraplegia, both surgical and medical, as well as social. The years of struggle by a few dedicated men, who started from virtually nothing, are at last beginning to bear fruit. Indeed, everyone who is familiar with the treatment and rehabilitation of these people will agree with me how many are the aspects of medicine and surgery combined in one paraplegic or tetraplegic patient and that the medical attendant in charge, be he surgeon or physician, must become absolutely familiar with *all* the aspects. Experience has shown that the separation of the immediate and early management of paraplegics and tetraplegics from that in later stages is unfortunate and has, as a rule, proved unsatisfactory. There cannot be any doubt that the best results in the treatment and rehabilitation of these patients are achieved in spinal units, where the whole treatment and rehabilitation, in both acute and late stages of spinal injuries, are carried out by a specialised staff who must devote their whole time to dealing with the many aspects involved in this complex subject of medicine.

Surgical procedures on the spine are only *one* aspect in the growing field of paraplegia and tetraplegia, which, as Professor Amako rightly pointed out, demands clarification and, I may say, most careful and selective application, to avoid

additional damage to the already injured spinal cord. The management of paralysed bladder, bowel and sexual functions, the problems of spasticity, reflex responses of autonomic mechanisms, pressure sores, the physical and psychological readjustment of the paralysed and his vocational and social re-integration are, today, of paramount importance for the future life of the paralysed and constitute a whole-time study.

A new speciality has been born, and the medical profession and the public at large should become more and more conscious that the spinal specialist who is concerned with the *whole* treatment and rehabilitation of paraplegics and tetraplegics is no less a specialist in his own right than, say, a chest physician, E.N.T. surgeon, medical or surgical neurologist, orthopaedist, or urologist. Until this is officially recognised by Government Health and Medical Authorities, young members of our profession will hesitate to take up this work as a proper training in this subject of medicine. The great danger is that the advances achieved over the years may be lost through lack of continuity.

I feel that this meeting today is the right occasion to put these views on record, as a basis for further thought with a view to finding the best ways of developing a specialised service in paraplegia all over the world.

Main Subject I

The Initial Treatment of Traumatic Paraplegia and Tetraplegia

1. PATHOLOGICAL PRINCIPLES IN THE INITIAL TREATMENT OF TRAUMATIC SPINAL CORD DAMAGE

By G. M. BEDBROOK

Paraplegic Unit, Shenton Park, Perth, Western Australia

TREATMENT of all medical and surgical conditions is governed by a knowledge of their essential pathology, both morbid and experimental. Such should be the case with the initial treatment of traumatic spinal cord damage. An examination of cases coming to post mortem in both early and late stages has convinced the author of the fundamental necessity for conservatism in almost 100 per cent. of cases of spinal cord injury with cord damage. The pathological principles which govern this decision are as follows:

1. The importance of the consideration of blood supply to the spinal cord and its relationship to trauma.
2. The mechanism by which trauma is caused to the spinal-column flexion, extension, rotation.
3. The mechanism by which the spinal cord is damaged; crushing, stretching, compression, flexion and extension.
4. The types of pathological syndromes which are observed.

In the Acute Stage

- i. Neural:
 - (a) No macroscopic damage whatsoever.
 - (b) Gross haematomyelia of the cord.

E