

**NERVE WOUNDS:  
SYMPTOMATOLOGY OF PERIPHERAL  
NERVE LESIONS CAUSED BY WAR  
WOUNDS; WITH AUTHORISED  
TRANSLATION BY FRED ROTHWELL**

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Authorised Translation by Fred Rothwell by J. Tinel & J. Dejerine & Cecil Augustus Joll

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**J. TINEL & J. DEJERINE & CECIL AUGUSTUS JOLL**

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# NERVE WOUNDS.

*SYMPTOMATOLOGY OF PERIPHERAL NERVE  
LESIONS CAUSED BY WAR WOUNDS*

BY

J. TINEL

ANCIEN CHEF DE CLINIQUE ET DE LABORATOIRE DE LA SALPÊTRIÈRE.

PREFACE BY

PROFESSOR J. DEJERINE

AUTHORISED TRANSLATION BY

FRED ROTHWELL, B.A., LOND.

REVISED AND EDITED BY

CECIL A. JOLL, M.B., M.S., B.Sc. LOND., F.R.C.S. ENG.

SENIOR SURGEON RICHMOND MILITARY HOSPITAL.

ASSISTANT SURGEON ROYAL FREE HOSPITAL.

CHIEF SURGEON-IN-CHIEF MAJESTIC HOSPITAL, CROIX ROUGE FRANÇAISE.

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## EDITOR'S INTRODUCTION

My object in making Dr. Tinel's book available in English has been to fill a very definite gap in the literature of peripheral nerve lesions. I am, of course, aware that there are excellent manuals on the subject by British authors, but none of them appears to me to cover the ground so fully, so authoritatively, and so originally as Dr. Tinel's.

The continental clinic system makes it possible for the clinician to investigate a far larger number of cases than under our own individualistic methods. I hope that, with the return of peace, the clinic system, introduced in a modified form by my colleague, Mr. James Berry, at the Royal Free Hospital, will be continued and expanded.

I have endeavoured to adhere closely to Dr. Tinel's text. If, however, I have failed to reproduce his meaning, the responsibility is certainly mine, as his book is most lucidly written.

I have throughout preserved the term "griffe" rather than use the rather doubtful translation "claw," and in one or two other cases where translation did not appear to be helpful, I have retained the original word. I wish to thank Mr. Rothwell for great help in the revision of the proofs.

CECIL A. JOLL.

WIMPOLE STREET, W.

OCTOBER, 1917.

## PREFACE

I AM pleased to be in a position to introduce to the medical public this work of my pupil Tinel on Nerve Wounds, for it is admirably adapted to the needs of the daily work of our military hospitals.

All surgeons and neurologists still remember how surprised they were, during the early months of the War, at the numerous cases of peripheral nerve wounds brought into our hospitals.

It was a big subject of which the few cases observed before war broke out had not enabled a complete study to be made; in addition, the uncertainty of our clinical and diagnostic knowledge of the nature of the lesions was complicated by the therapeutic aspect of the problem.

Suddenly we found ourselves confronted with so many facts unlike one another that it is easy to understand our hesitation in classifying and interpreting them, and above all in pronouncing them amenable or not to surgical intervention.

Indeed, we had first to establish the exact signification of the variable and differently associated symptoms met with in all these cases, to specify the diagnostic value of partial or total paralysis, of muscular hypotonia and electrical disturbances, of anæsthesia, paræsthesia, or pains in their various modalities; to throw light upon the problem of vaso-motor secretory or trophic disturbances, at times so intense, or at other times scarcely perceptible, and above all to connect each of these symptoms with the determining lesion. By close study of all these disturbances and of their evolution, my pupils and myself have been enabled to set up the main syndromes of nerve interruption, of compression, irritation or regeneration, and the syndromes of dissociated or partial lesions.

It was also necessary to study the nerve lesion itself, in order to understand the mechanism of interruption irritation or compression. It was specially important to become acquainted with the exact anatomical conditions which either permit of the regeneration of the nerve trunks or make this impossible. These problems have been solved by histological study and experimental investigation. We are now acquainted with the particular characters of neuromata and pseudo-neuromata; we know how the vicious cicatrices which I have called nerve keloids, and which set up a frequently insurmountable obstacle to the regeneration of the axis-cylinders, are formed; consequently, we are possessed of



histological information which either calls for or proscribes surgical intervention.

In a word, the same histological and experimental discoveries have enabled us to specify the normal conditions of operation; they have demonstrated the illogical nature and the uselessness of certain interventions, the utility and rationale of others; they have not only encouraged the practice of simple liberations and of nerve sutures, but they have also enabled us to throw light on many aspects of surgical technique.

For long months all the laboratories, clinics and neurological centres of our country have given themselves up to these investigations, thus carrying out a task which has completed the unwearied labours of former histologists, physiologists, and clinicians.

Whilst it must be confessed that all our problems have not yet been completely solved, and there are still many obscure points, all the same it may be affirmed that the main lines to be followed have now been traced. The time has come to unite in one book the many investigations which form the basis of this new work.

It must indeed be recognised that these ideas of nerve pathology, anatomy and physiology, have not yet gone far beyond the sphere of the neurological and surgical centres. Nerve wounds are still a mysterious and disturbing problem to many doctors. And yet it is important that these fundamental principles should be known to all. Nerve lesions must not continue to remain unknown in the routine of hospital life.

No longer must there be, for whole months, useless electrical or massage treatment of complete nerve sections, or the unnecessary excision of nerves simply compressed, irritated, or in a fair way towards natural recovery.

Regarding the prognosis of nerve wounds, or of the operations on them which are frequently necessary, we must not allow opinions to be established that are incorrect, discouraging in their pessimism, or dangerous in their optimism.

Above all, we must not regard as nerve lesions, functional paralysis and disability, the cure of which is so easy when a timely diagnosis has been made.

In a word, it is not sufficient that all doctors and surgeons should scrupulously conform to the indications of neurologists; they must also be co-workers. This is the best means of multiplying observations, of recording both clinical data and therapeutical indications, and of obtaining not only the best results for the wounded, but also a solution of problems on which full light has not yet been thrown.

It is for this reason above all that I regard the publication of the present work as necessary.

It will show doctors how almost all clinical problems may be solved by the aid of a few very simple facts of general anatomy and physiology.

I am glad to see once more verified the rule which I have always followed, namely, that you cannot have a good clinical neurology without exact anatomy.

We shall also see that we need only have recourse to the elements of histology and nervous physiology in order to deduce therefrom the logical rules of physical or surgical treatment.

Consequently, I cannot sufficiently congratulate the author of this work on his constant endeavours to call attention to the knowledge of anatomy, physiology or histology, necessary for an interpretation of the facts.

His remarkable qualities of exposition will also be noted. One must be a thorough master of one's subject to compile, from an enormous mass of observations and documents of every kind, a book that is alike perfectly clear and scrupulously exact.

The wealth and choice of the information offered, the carefully executed photographs, the numerous clear diagrams, make this volume a fine study in symptomatology, of great educational importance, and one which completely fulfils the purpose aimed at both by the author and by the publishers.

It is a pleasure for me to have encouraged the idea of this work and witnessed its realisation. Written, so to speak, in my very presence, it is a faithful *résumé* of the investigations entered upon in my service by all my fellow-workers of the Charcot Clinic.

J. DEJERINE.

PARIS.

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