Physical medicine and rehabilitation—a relevant interdisciplinary speciality

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The field of physical and rehabilitation medicine (PM&R) has been described as rapidly developing and important medical specialty and the needs of (1) developing own clinical competencies and to adapt them to the demand of modern medicine, (2) of finding tools to fulfil the enormous demands of the comprehensive approach and (3) of developing a scientific concept of the field [1]. One aspect of PM&R is the use of physical modalities (but not only of them) for the prevention and treatment of different diseases and also for their rehabilitation which reflects that these modalities (1) are related to physical energies (such as heat, light, electricity, mechanical forces) but also that they (2) are able to induce (physical, physiological) reactions in the (human) body. “Physical medicine” therefore has been defined by Gutenbrunner as “the medical discipline that covers, on a scientific basis, interventions aimed at improving physiological and mental functioning, using physiological mechanisms (such as reflexes, functional adaptation and neuroplasticity), as well as physical and mental training” [1–3]. Physical modalities in most cases are applied repeatedly and then are able to induce adaptive modifications of physical functions [3]. Furthermore, the field of PM&R—with the ICF-model as a basis—is a specialty with competencies in diagnostic and therapy as well as of coordination of the multi-professional and interdisciplinary rehabilitation teams, and therefore is needed in all phases of medical care—from acute care (intensive care units) to community-based interventions [1].

PM&R is also a very important speciality in modern medicine. Nevertheless, if you are asking people this

knowledge seems to be not very popular at the moment. For the future, it would be not enough to be extremely active within our own (national and international) speciality, but all representatives of the field of PM&R would do the best for their own speciality if they were well-accepted from all other parts of the health care system which includes our patients, but also specialists of other disciplines, therapists and politics. It seems that there is really a need to relaunch the unique competences and quality of PM&R-specialists to reach the awareness of the community. Furthermore, it will be very important to be attractive for young physicians to get enough and qualified residents, who will be the future of PM&R. In Austria, we should focus on practical clinical competencies (of PM&R-specialists) from the assessment to treatment, like invasive pain treatment, children, sports and exercise, biofeedback, shock wave treatment and several other aspects of “mechanotransduction”, and on developing interdisciplinary scientific concepts for intensified translational research in this field. Furthermore, most rehabilitation processes with their aim to improve physical, mental and social functions of the patients have the speciality of PM&R in their centre. Rehabilitation has to be individually planned by specialist (with a competence in the field of rehabilitation) with the patient and family as active members within the centre of the rehabilitation team [4]. In the field of rehabilitation, the research should be interdisciplinary and not only focus on effects of different modalities or the whole rehabilitation process, but also on adherence and efficiency to find the best approaches for the health care system.

From the viewpoint of multi-disciplinary and interdisciplinary health care, PM&R is a really important speciality which has its place in all phases of medical care—from the prevention of diseases until palliative medicine [4, 5]. In this volume, we therefore focus on the interdisciplinary aspects of PM&R from the prevention (prevention of back pain by Thomas Dorner) of diseases to their treat-

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ment (osteoporosis by Katharina Kersch and pain medicine by Mathias Wewalka) and their rehabilitation (cancer by Bruno Mähr). Furthermore, the very important aspects of PM&R in Geriatrics (by Katharina Pils) are presented. Practical assessment (Mohammad Keilani), radiology (Franz Kainberger) and “skeletal muscle and exercise” (Michael Quittan) are further typical PM&R-aspects of eminent importance. Health care demands and demographics of the modern world underline the importance of PM&R and its comprehensive approach, when thinking for example on cancer, back pain and geriatrics. It is clear that PM&R is much more than presented in this volume. Nevertheless, there are relevant aspects presented in a comprehensive way. Finally, I therefore would like to thank the editors of Wiener Medizinische Wochenschrift for their kind invitation to edit this special edition. Thanks to all authors and reviewers who made this special PM&R edition possible.

Conflict of interest

The author declares that there are no actual or potential conflicts of interest in relation to this article.

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