Neuropathology and its meetings: a difficult relationship between evolving partners

Werner Paulus

Published online: 13 May 2012
© Springer-Verlag 2012

A few decades ago, when neuropathology was self-sufficient and remote, the relationship between neuropathology and neuropathology meetings was comfortable and harmonious. Neuropathologists presented interesting cases and descriptive findings to other neuropathologists, and this regular exchange was the scientific highlight of the year not to be missed. On the other hand, the presentations were highly specific to neuropathology and tended to be of minor interest to basic and clinical neuroscientists.

In the meantime, both neuropathology and its meetings have developed and, as in a long marriage, characteristics of the partners may change and this poses challenges. Neuropathology has evolved into a dynamic, highly visible, increasingly experimental subject promoting the understanding of pathogenesis of disease and actively interacting with other areas of neuroscience. Rather than descriptions of immunohistochemical expression patterns of fortuitous proteins in various types of inclusions followed by wild speculation on pathogenesis, neuropathology is now often at the forefront of defining new mechanisms of disease based on the logical experimental approaches. At the same time, neuropathologists continue to be responsible for diagnoses based on human tissue obtained by biopsy and autopsy from individual patients. Neuropathologists are, therefore, in a unique position that allows them to relate their experimental studies of disease mechanisms to the “real world” of human tissue and human disease. Furthermore, since basic neuroscientists increasingly concentrate on neurological diseases, their collaboration with neuropathologists reduces the probability of introducing artefacts from *in vitro* or *in vivo*

models that have no relevance to human disease. Their combined experience of diagnostic and experimental work makes neuropathologists attractive partners for basic neuroscientists, as they speak the same language and may bring experimental neuroscientists down to earth. In other words, modern neuropathology means studying mechanisms of neurological disease validated by experience with human tissues. And this is exactly the type of study that *Acta Neuropathologica* likes to publish and it represents one of the reasons why this journal and neuropathology in general have experienced an increased impact.

At first glance, the development of neuropathology meetings has not been as fruitful. In the last few years, organizers of neuropathology meetings have often been disappointed by lower than expected attendances at national and international meetings (Fig. 1). Furthermore, the average age of participants appears to be considerably higher than that encountered at neuroscience conferences such as the Society for Neuroscience meeting. A substantial number of people attend neuropathology meetings, not because of the scientific program, but from obligation, for social reasons or because of the business meeting. Organizers, officers and delegates tend to complain of a variety of unfortunate circumstances to account for the perceived lack of interest. They include the economic crisis, too many invited speakers, too few invited speakers, too many posters, too few posters, too little promotion before the meeting, an uninteresting program, high registration fees and hotel expenses, and an inconvenient or unattractive city, among others. However, given the excellent standing of current scientific neuropathology and the increasing number of scientists working in neuropathology institutions (at least in some countries), systemic factors inherent in neuropathology appear to be responsible for the frustration of congress organizers and societies.

W. Paulus (✉)
Institute of Neuropathology, University Hospital Münster,
Domagkstr. 19, 48149 Münster, Germany
e-mail: werner.paulus@uni-muenster.de

Fig. 1 Number of published abstracts at international (International Society of Neuropathology, European Society of Neuropathology) and Japanese (JSN), American (AANP) and German (DGNN) national neuropathology meetings. Regression analysis reveals decreasing numbers of abstracts over time for ISN ($p < 0.02$), JSN ($p < 0.001$), AANP ($p < 0.001$) and DGNN ($p < 0.005$) meetings. Thanks to Toshiki Uchiyama, Hannu Kalimo, Matti Haltia and Dirk Troost for providing data and Joachim Gerß for performing statistics

In my view, the problems of neuropathology meetings and the rise of neuropathology are directly related. The increasing impact of neuropathology on other clinical neurosciences makes huge neurology, neurosurgery and neuroscience meetings more attractive places for conveying exciting data to a large audience (including people deciding on grant proposals, by the way) than the more intimate neuropathology atmosphere where everybody knows everybody else. Another reason is increased specialization and consequent narrowing of interests. Today

there are only a few neuropathologists who are able to perform and publish high quality science in completely different areas, such as neurodegeneration and neuro-oncology. Tumor pathologists must select from a multitude of oncology meetings; researchers in Alzheimer's disease attend meetings on neurodegeneration, and neuropathologists with a focus on multiple sclerosis prefer MS and neurology conferences, consequently the interest of modern specialist neuropathologists in areas outside their circumscribed field of research tends to be limited. Finally, the involvement of neuropathologists in organizing national and international, multi-institutional joint research endeavors has increased, further reducing the time available for the classical neuropathology meeting. Paradoxically, in a sense, it is just the success of neuropathology that impairs growth and prosperity of neuropathology meetings.

Now, are neuropathology meetings endangered and will they disappear from our timetable in a few years? I do not think so. In order to retain the viability of neuropathology meetings, organizers may wish to concentrate on our core business rather than the overambitious recruitment of as many delegates as possible in grandiose congress centers. Areas specific and central to neuropathology include studies using human nervous system and muscle tissue, new tissue-based diagnostic methods, development and application of criteria for histological and molecular diagnosis, quality control in the neuropathology laboratory, education on recent developments, and unusual findings in individual cases. There is nothing wrong with presenting experimental studies using in vitro and in vivo models at neuropathology meetings, since mechanistic studies represent an integral, successful and increasingly visible part of neuropathology, as discussed above. However, these studies can be presented at other neuroscience meetings as well. Diagnostic approaches and studies based on human tissue, on the other hand, are the specific issues and challenges for neuropathology and are of interest to virtually all neuropathologists. Neuropathologists will hardly miss the congress devoted to their core business. Focussing on these specific constituents of neuropathology will not make our meetings the largest in the world, but should keep them interesting, important and vibrant.