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Differentiation of Epidemiology and Issues in Neuro-Oncology between the East and the West Challenges and Openings

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Abstract

Although excrescences of the brain and central nervous system (CNS) are fairly uncommon, comprising only 1 -2 of the overall cancer burden, they represent a substantial source of morbidity and mortality worldwide. The age- shaped periodic frequency of CNS tumours is reportedly low; still, there is substantial global variability in its frequency, with nearly five-fold difference between regions with the topmost rates in developed countries in the West and those with the lowest rates in developing countries in South- East Asia, including India, possibly attributable to pivotal differences in environmental factors, heritable vulnerability and cultural practices, as well as resource constraints in low – middle income countries precluding precise ascertainment and accurate opinion. The burden of CNS tumours is further compounded by the fact that they bear largely specialised and professed multidisciplinary care, including access to modern neuroimaging, neurosurgery, neuropathology and molecular biology, radiotherapy, chemotherapy and rehabilitation services, which may not be considerably available in an integrated manner in large corridor of the world with a large variation in clinical- uniformity of care and attendant diversity in clinical issues. CNS tumours encompass a eclectic spectrum of histopathological realities with differences in donation, distinct molecular/ heritable differences, different natural behavior and varying clinical issues. Survival is largely dependent on histology, grade and molecular biology, but varies considerably across landmasses, indeed for the same tumour type and grade. In general, survival is advanced in children with primary brain tumours than in grown- ups, largely due to the differences in histological distribution across age groups. Still, there is wide variability, with 5- time survival for paediatric brain tumours being< 40 in some low – middle income countries compared with 70 – 80 in the advanced world. This review compares the descriptive epidemiology and clinical issues of primary brain tumours between the East and the West that pose unique challenges but also give new openings in contemporary neuro- oncological practice.

Keywords: Neuro- Ophthalmology; Oncology

Background

Substantiation- grounded drug relies on publication of studies that form the base of the substantiation. The studies vary by design including case reports and case series that propose clinical associations, cross-sectional or longitudinal experimental studies with larger sample sizes that demonstrate statistical associations, and randomized control trials (RCTs) that compare interventions in matched groups to give gold standard experimental substantiation and meta- analyses, which distil findings of multiple studies[1]. The conception of position of substantiation is frequently applied to induce a scale of study types grounded on the type of question being asked, with not all study types being applicable to all study questions, both due to the nature of the question(e.g., an RCT isn't the stylish study for a question of frequence or prevalence) and/ or feasibility(e.g., RCT may not be practical for study of a rare, sluggishly progressing complaint). The Oxford Center for substantiation- Grounded Medicine offers excellent coffers on this content . There has been adding recognition of the significance of study design and quality of reporting including development of agreement guidelines for reporting of certain study types (e.g., STROBE and CONSORT). Critical reading of the literature has come a focus at all situations of medical education [2].

A review of clinical publications in 2 leading ophthalmology journals showed an increase in prospective papers as a proportion of total publications and stable publication of case reports between 1980 and 2000[3]. We sought to make a analogous comparison between 1995 and 2015 in the Journal of Neuro- Ophthalmology (JNO) as well as 4 extensively read general ophthalmology journals. We chose this interval because it spans publication of guidelines for specific study types, presumably bringing with it increased mindfulness of study design [4].

In the 20 times between 1995 and 2015, JNO had periodic publication growth exceeding that of the general ophthalmology journals. Adding impact factor for JNO during that period suggests that quality increased along with volume [5]. Thus, JNO is serving an adding part in the dissipation of neuro- ophthalmic clinical disquisition. This is particularly important to balance the fairly poor representation of neuro- ophthalmology in general ophthalmology journals, where only3.3 of papers in 2009 represented neuro- ophthalmology (5), and some of whom warrant neuro- ophthalmic representation on their editorial boards [6].

Case report process

In both general ophthalmology journals and JNO, there has been an increase in the number and proportion of randomized controlled trials, the gold standard for clinical exploration, between 1995 and 2015. There was a contemporaneous drop in the proportion of

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nonrandomized interventional studies suggesting a shift from lower to advanced quality studies, which accompanies overall adding position of substantiation in ophthalmology publications [7]. Other logical study designs have also increased in both number and proportion in general ophthalmology journals, which suggests durability of growth in this area preliminarily demonstrated between 1980 and 1999[8]. Publication of papers reflects the combined impulses of experimenters, backing agencies, and journal editors, with the impulses of the ultimate 2 groups likely impacting the first group. This growth may have redounded in increased mindfulness of study design on the part of all of these constituencies, with allocation of reporting guidelines for studies (e.g., STROBE and CONSORT) potentially being a cause or result of increased mindfulness. The most dramatic change in both general ophthalmology journals and JNO from 1995 to 2015 was a drop in descriptive studies in general and case reports specifically. Case reports were nearly excluded from general ophthalmology journals during the period of study, in discrepancy to relative stability in the publication of case reports at the end of the 20th century [9].

Although JNO trends generally equal those of general ophthalmology journals, there are a many points of divergence that support the requirements of our subspecialty. First, in discrepancy to general ophthalmology journals, JNO has a more pronounced increase in case – control studies and a small drop in cohort studies. This highlights the type of study designs more applicable to rare neuro- ophthalmic conditions. Second, although the commensurable drop in case report publication was analogous in JNO as the general journals, there remained a robust representation of case reports in JNO in 2015, in discrepancy to elimination from general journals [10]. Although these don't give the advanced situations of substantiation characterizing other study designs, they continue to play an important part in thesis generation across the extensively dispersed neuro- ophthalmic community and therefore form an important part of our literature [11].

Discussion

Over 20 times, JNO has shown disproportionate growth in clinical exploration papers while showing analogous trends in dwindling publication of descriptive studies and adding publication of logical studies compared with general ophthalmology journals [12]. It has maintained case report representation in the literature and favoured growth in case – control studies; applicable to the size and diversity of our subspecialty, as well as the rare nature of the conditions we treat [13]. There remain numerous openings to critically estimate trends in the neuro- ophthalmic literature including examination of study design choice and reporting quality as has been performed by other authors for specific study types and motifs in ophthalomology(7 – 9) and for the medical literature more astronomically. These are also important features of the literature because it pertains to serving as the substantiation base for medical practice.

Conclusion

Tumours of the brain and CNS, although rare, represent a major source of morbidity and mortality worldwide. Encyclopedically, there exists substantial variability, with a significantly advanced prevalence in developed countries compared with developing countries, conceivably attributable to differences in environmental and inheritable factors as well as resource limitations. Non-uniformity of care with large variations in clinical pathways results in significantly inferior issues in numerous LMICs. Collaboration.

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