This session of the Princeton Conference highlighted the goals and progress of the Stroke Progress Review Group. The Stroke Progress Review Group was formed in 2001 to focus research efforts in (1) stroke treatment, (2) stroke prevention, and (3) stroke recovery. In the area of preclinical stroke research, the need for improved molecular, cellular, and animal models of stroke was again emphasized. The dearth of new treatments may reflect, in part, overinterpretation and misapplication of the preclinical studies. Yet, viewed with a nontherapeutic lens, these studies have provided new insights into the pathophysiology of ischemic injury and insights into interactions among neurons, glia, and vascular cells. The importance of appropriate application of preclinical data to clinical trial design was emphasized. In addition, there was a discussion of novel clinical trial designs for phase I–III trials. Both inadequate preclinical models and inappropriate clinical trial design intermittently have been blamed for the numerous promising stroke clinical trials that turn out to have negative results. The use of futility analysis is now standard as a result. Selection designs and adaptive designs are now receiving attention as methods that may improve trial efficiency. Careful consideration of appropriate outcomes including patient-reported outcomes and surrogate outcomes are now being developed, and acceptance is widening. New recruitment strategies also have received substantial attention in the past decade as slow recruitment continues to plague stroke clinical trials. The use of recruitment networks for acute treatment trials, stroke prevention trials, and stroke recovery trials has demonstrated early success in both improved rates of recruitment and patient diversity. Multiple network structures were described. International recruitment collaborations also have succeeded and are now feasible with advances in clinical electronics. In parallel with these advances in science and methodology, this session summarized progress in stroke prevention, treatment, and delivery of stroke treatment. Phase III clinical trials have been completed that have changed treatment guidelines. New drugs, new drug algorithms, and new devices have been developed to improve reperfusion. Stroke center–based innovations in care have been widely adopted and benefits are well-documented.

Future recommendations of the Stroke Progress Review Group will likely address the need for more science. Important areas include ischemic and hemorrhagic injury, aging and pathophysiology of blood vessels, clot formation and dissolution, and mechanism-based drug targets and drug candidates. For clinical stroke research, the new networking and other methods show promise. More work is needed, as is funding for models to sustain existing investigator teams and to attract and develop the investigators of the future.

Disclosures

None.

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Stroke Progress Review Group: Looking Back and Going Forward: Introduction
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