Introduction of the perioperative pain

The ability to abolish perioperative pain has been a dream of healthcare providers for millennia. The quest of painless postoperative course took an enormous stride forward over a century ago with the discovery of the dense regional anaesthesia provided by perineural local anaesthetic.

Here is a great deal of progress that must be made in both the preclinical and clinical arenas before making painless surgery a reality.

Last year in the Journal «Nature» Binshtok et al. reported using the TRPV1 (transient receptor potential vanilloid 1) channel properties to produce potent blockade of pain fibres, while sparing other sensory and motor fibers in rat.

Surgical stresses trigger programmes of brain activities to correct the disruptions by activating the endocrine, sympathetic, immune, and behavioural systems. Thus, with molecular biology it can prove that immune molecules, the interleukins, signal the brain thorough many routes through the bloodstream and through nerve pathways.

Wound infiltration with currently available local anesthetics affecting all neural fibers type may decrease nociceptive transmission, but usually does not provide complete analgesia/anesthesia as do neuraxial and peripheral nerve blocks. A new medication that blocks only small fraction of nerve fibers would produce results superior to those that are obtained with currently available local anesthetics. Despite the impressive advances and optimistic outlook, many chronic pains remain intractable.

In addition, because many patients now remain hospitalized exclusively to receive potent analgesics, rendering them pain-free would negate the need for a prolonged hospitalization, but would require additional provider training in ambulatory perineural infusion techniques.

Will a pain–fiber-specific sodium–channel blocker become a reality? Will a medication with similar effects become available for clinical use within the next decade?

Acute pain has emerged as an important issue because of associated morbidity and mortality. The challenge is to employ multimodal analgesia, early nutrition, rapid, and rapid mobilization after surgery and trauma to aid acute rehabilitation to the benefit of the patient. The aim should be that majority of patients have good relief of perioperative acute pain together with rapid functional recovery. To achieve this result requires a substantial educational and organizational effort to apply the knowledge and methodology now available.