



Editorial for focused issue “advances in knee rehabilitation”

In this special issue of *Annals of Translational Medicine* focused on advances in knee rehabilitation, well-distinguished clinicians, and researchers address recent advances and problems related to orthopedic knee rehabilitation. I selected most relevant problems of the knee dysfunction such as, osteoarthritis of the knee joint, ligament injuries and post operative management of total knee arthroplasty (TKA). Since many patients do go to a physiotherapist directly I felt it was important to add a review article by Young Kim about red flag rules and identify when not to treat the patient. Our intent was to present the latest research in review articles and give readers guideline as to how to manage complex knee dysfunction, as well as to present some cutting edge original research on advances in knee rehabilitation.

In the field of osteoarthritis, Dr. Mont and his co-authors presented a review of various non-surgical options. Articles by Joseph Zeni, and John Kenney about usefulness of specialized bracing options in knee arthritis follow Dr. Mont's article. Dr. Sultan and co-authors have shown early beneficial results of quadriceps muscle electrical stimulation in patients with osteoarthritis of the knee joint. Simeon Mellinger and Grace Neurohr presented a very comprehensive review of common knee injuries in runners and have presented evidence based treatment protocol. Leah Harris and co-authors present a large series of patients to demonstrate benefits of adding Astym[®] therapy to traditional physiotherapy. Kala Flagg and co-authors have done a detailed review of causes of common ligament injuries with a focus on anterior cruciate ligament injury. They have also done a very exhaustive literature review to present a guideline of how to decide when athletes can return back to sports safely.

Next group of articles are focused on advances in rehabilitation of TKA patient. Quadriceps weakness and resultant atrophy are common problems after TKA. This can lead to both permanent functional deficits as well as has been shown to have a greater economic burden. Neuromuscular stimulation (NMES) of the muscle has been shown to be helpful to improve quadriceps function and help patients regain strength faster. Rachana Dabadghav and co-authors presented effects of NMES at 2 weeks while as our group has presented the results when the stimulator is used for 20 minutes 2–3 times a day daily in addition to standard therapy. Dr. Delanois and co-authors have done extensive review of all types of therapy and have outlined what works and what does not for improving function after TKA.

I am extremely thankful for the valuable contribution of all the expert contributors, who have helped to elucidate various aspects of challenges and solutions in orthopedic knee rehabilitation. I believe that this focused issue on advances in knee rehabilitation will help readers further enhance their knowledge in solving difficult knee problems in patients.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

Ethical Statement: The author is accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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